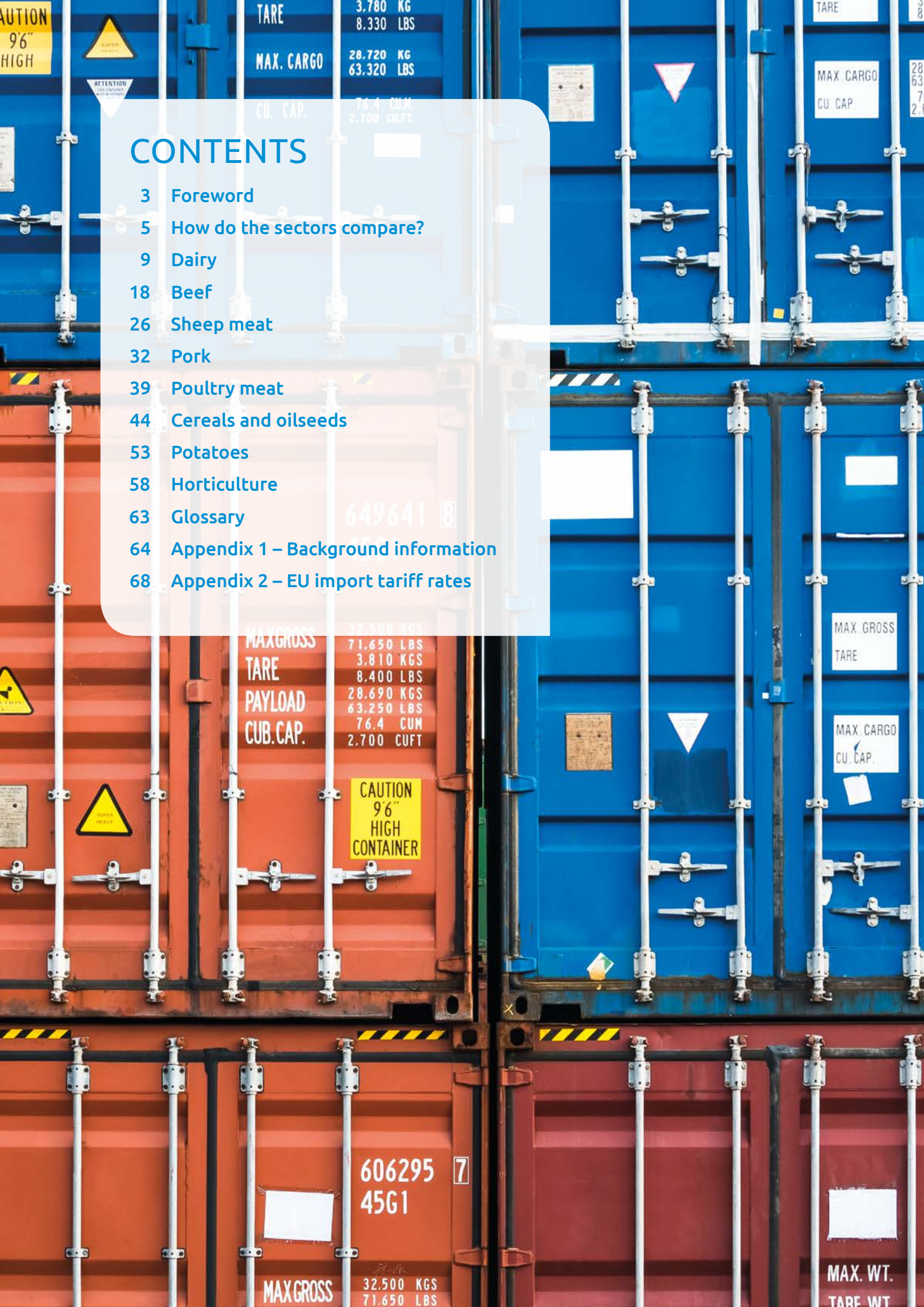
Market Intelligence February 2019

AHDB

HORIZON

Brexit prospects for UK agri-food trade



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FOREWORD

Amandeep Kaur Purewal
Senior Analyst

AHDB has been at the forefront of analysis and insight relating to Brexit's impact on UK agriculture. We have explored areas including trade, policy, availability of labour and the regulatory environment in our Horizon series of publications in order to help farmers and growers understand the changes ahead and how they can best prepare their businesses in these uncertain times.

At the time of writing (January 2019), there remains considerable uncertainty regarding many aspects of Brexit, including the UK's future trade relationship with the European Union (EU).The prospect of a 'no deal' Brexit cannot be ignored and we now find ourselves in a very fluid and rapidly changing political environment. A 'no deal' scenario could have a seismic impact on UK trade in agricultural products and, subsequently, major implications for all of the UK's agricultural sectors. It is crucial that this is understood by farmers and policy makers if disruption throughout the industry is to be avoided.

In response, AHDB will be publishing relevant information to help our farmers and growers understand the evolving situation, what it means for them and how they can prepare.

The aim of this report is to provide readers with an understanding of how agri-food trade could be affected once the UK leaves the EU, under both an agreed withdrawal and under a 'no deal' scenario.

Felicity Rusk
Analyst

With the Brexit clock ticking, this report revisits some of the key questions relating to the trade of agricultural goods, provides more up-to-date trade data and presents the latest insight on relevant issues. The main agricultural sectors are covered, looking at the potential disruption to existing trade dynamics. In addition, it provides a snapshot of our global competitors and how our costs of production measure up against them.

Factors such as the current trade situation, potential tariff levels and the size of the domestic production base all make for a complex picture when examining UK agriculture. The first section looks at how trade measures up in different sectors and their relative self-sufficiency levels. It also aims to provide ready comparisons between sectors in terms of tariff levels. Subsequent sections look at each commodity area in more detail.

HOW DO THE SECTORS COMPARE?

The UK is predominantly a net importer of most food products. Barley is the only product shown of which the UK has been a consistent net exporter in recent years (Figure 1).

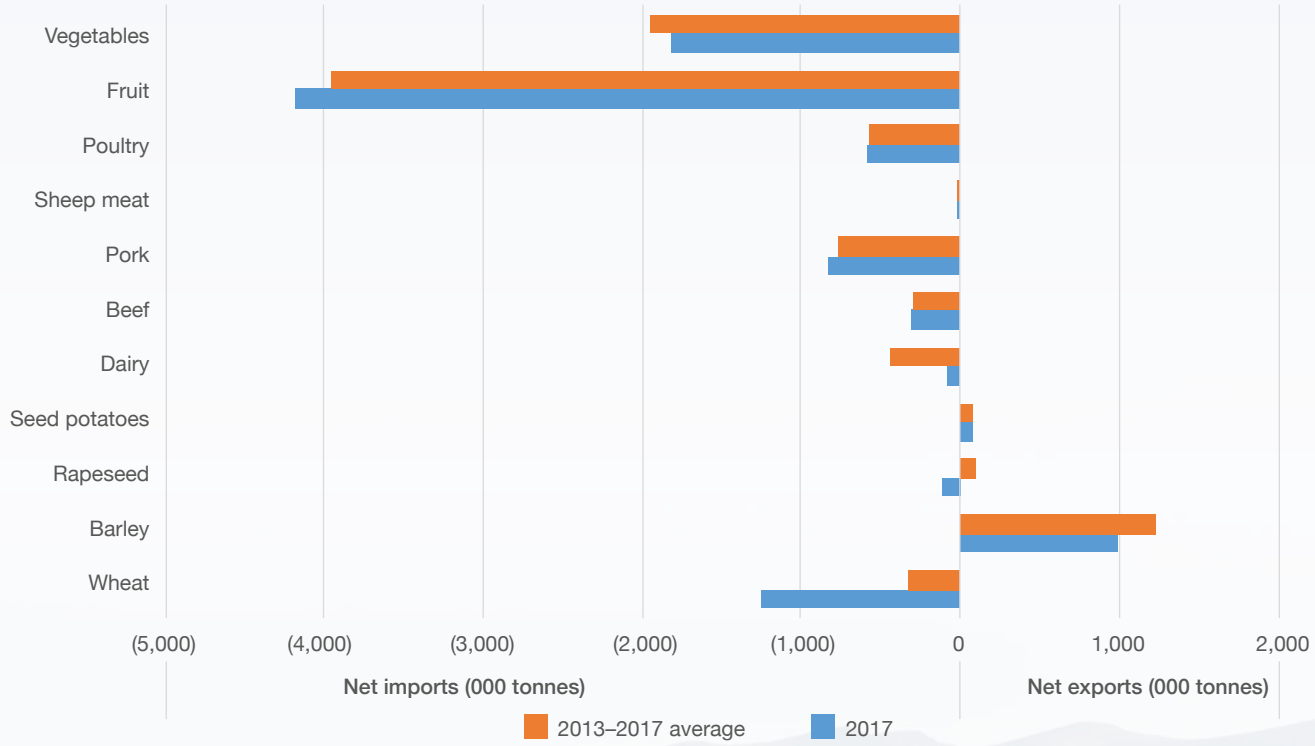


Figure 1. **UK food products net trade**

NB: For wheat, barley and rapeseed, the trade data refers to crop years 2013/14 to 2017/18 rather than calendar years

Source: Defra, IHS Maritime & Trade - Global Trade Atlas®/HMRC

The UK is on the cusp of being a net exporter of sheep meat. As mentioned later in the sheep meat section, there are some issues over the credibility of trade data post-2015, with exports expected to be higher than official figures show. Furthermore, Figure 1 simplifies the situation for sheep meat as the UK exports around 28% of its production to the EU (mainly in the form of carcases) and imports around 24% of its production from New Zealand (mainly as legs). This allows the seasonality of UK sheep meat production to be smoothed out and addresses carcase balancing issues. For other red meat and poultry, as well as fruit and vegetables, the UK is a clear net importer.

The UK is generally a net importer of total dairy products, although it is a net exporter of fresh milk and cream, as well as milk powders.

Coupling import/export data with domestic supply and demand provides an idea of the UK's self-sufficiency on a sector-by-sector basis. Fruit and vegetables stand out as the types of food upon which the UK is the most reliant on imports (Figure 2). The self-sufficiency ratio for pork is also relatively low in comparison with most of the other products shown, but, for meat, this ratio can be misleading due to the issue of carcase balance. For example, if there is greater domestic demand for one part of an animal than others, imports may be required rather than an increase in production, as the latter would also produce other parts of the animal for which there is little demand.

Impacts of tariffs

Under a 'no deal' scenario, tariffs would apply on UK food exports to EU, as well as non-EU countries, until trade agreements were negotiated. To provide an idea of which sectors or food products could be most affected by the imposition of World Trade Organisation (WTO) third-country tariffs on exports, Figure 3 (see overleaf) plots the 2017 value share of a particular food product against its ad valorem tariff, based on 2017 export unit prices.

Exports of fresh beef carcases would be subject to the highest tariff of all the products shown but represent a lower value share of 2017 food exports than fresh boneless beef. The products/sectors most impacted would be those where both the tariff and value share is highest. Nevertheless, an export tariff will have more of an effect on products where the UK is a net exporter. On this basis, fresh lamb carcase and barley exports are likely to feel the largest impact, with knock-on effects for domestic prices within their respective sectors. There is the opportunity to make use of tariff-rate quotas (TRQs) to export at lower or zero tariffs but, these are on a first come, first served basis and would not be sufficient to cover the bulk of UK exports in a typical year. Although both the UK and EU have stated their commitment to avoid a hard border between Northern Ireland and the Republic of Ireland, under a 'no deal' scenario this will be unavoidable and so could provide a challenge for the dairy sector as most milk and cream from the UK is exported to Ireland for processing.

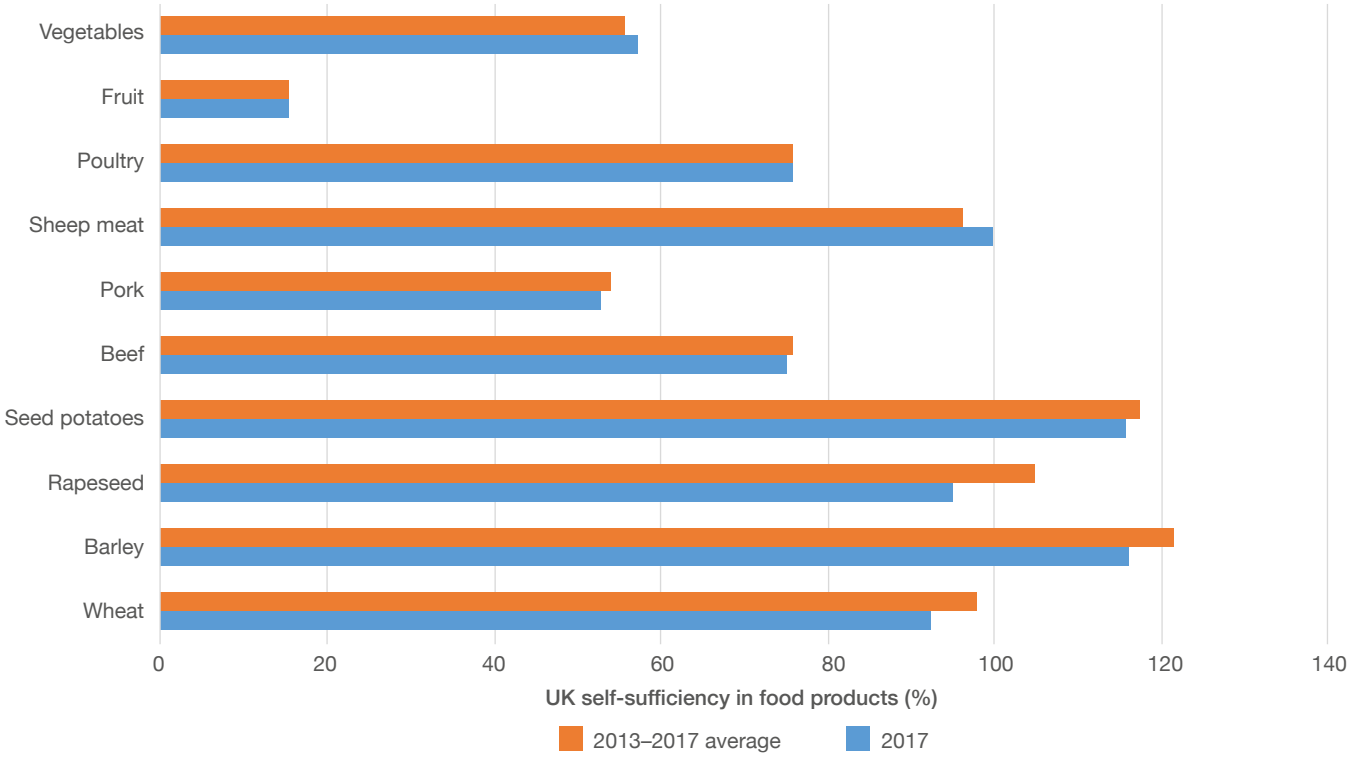


Figure 2. **UK self-sufficiency in food products**

NB: For wheat, barley and rapeseed, the trade data refers to crop years 2013/14 to 2017/18 rather than calendar years
Source: Defra, IHS Maritime & Trade - Global Trade Atlas®/HMRC, AHDB

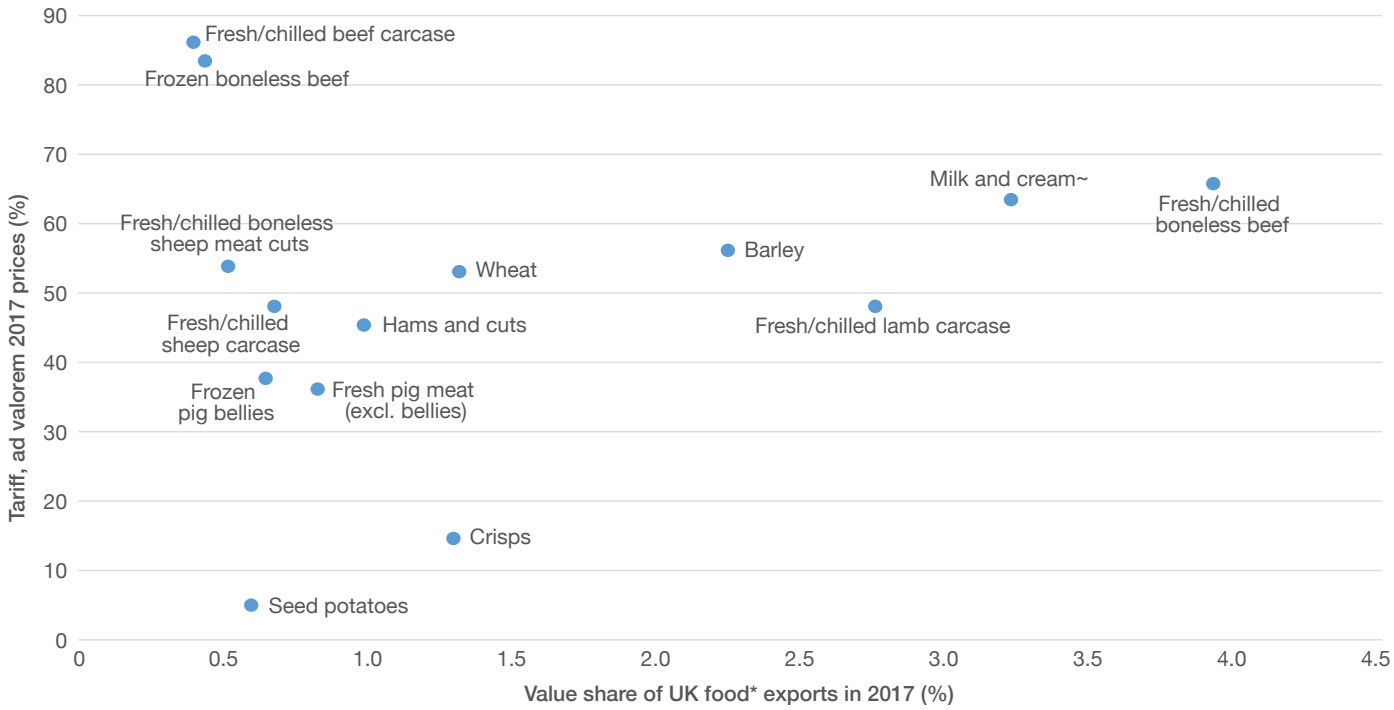


Figure 3. **Tariffs and export value share (2017) of various products**

*Fruit and veg, meat, cereals, dairy and eggs; ~ of a fat content by weight of >3% but <6% not concentrated, nor containing sugar
Source: Defra, IHS Maritime & Trade - Global Trade Atlas®/HMRC

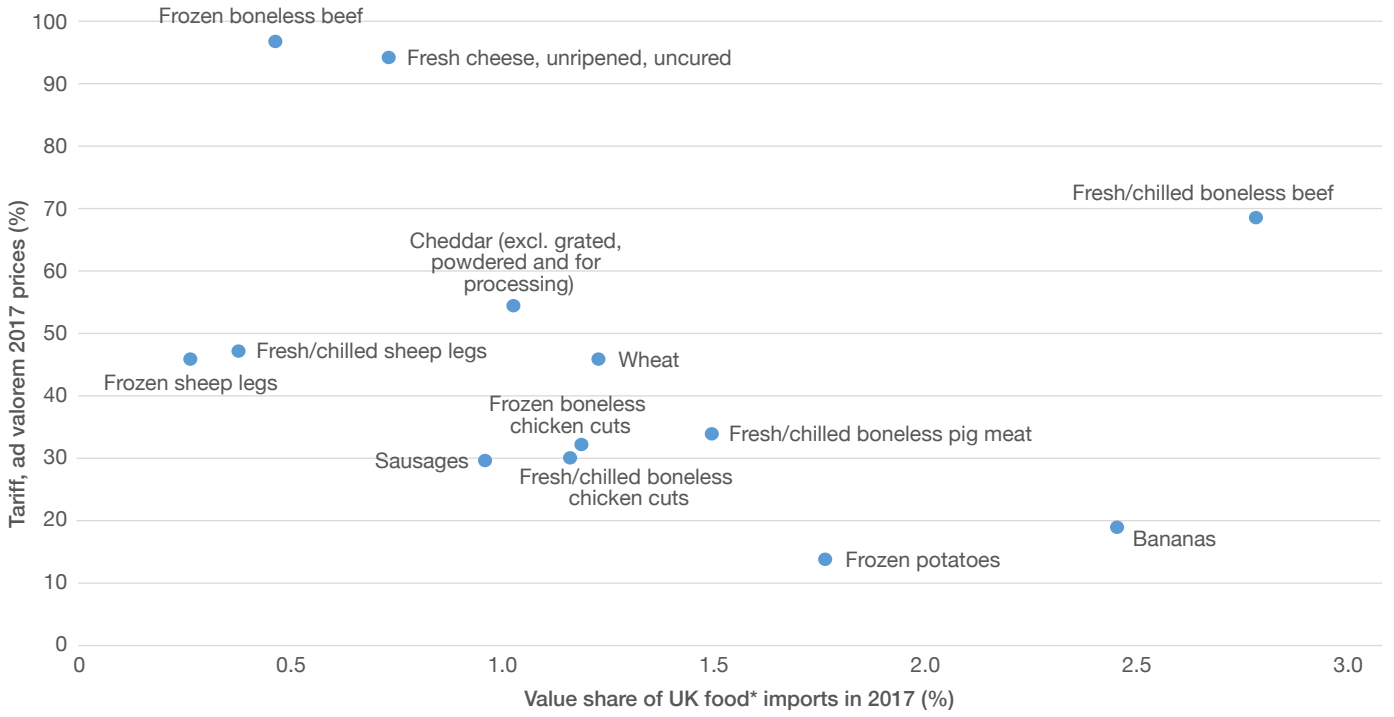


Figure 4. **Tariffs and import value share (2017) of various products**

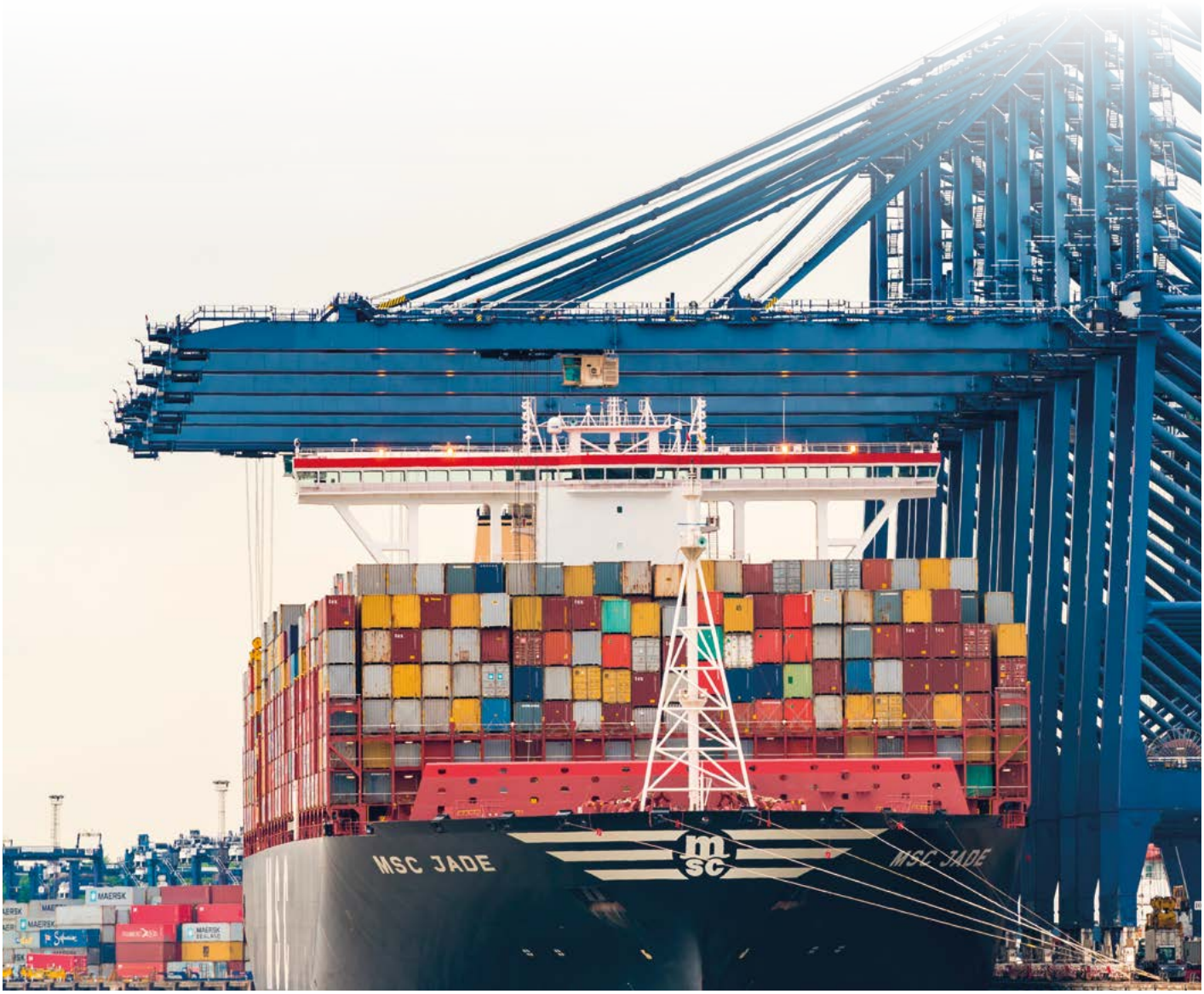
*Fruit and veg, meat, cereals, dairy and eggs
Source: Defra, IHS Maritime & Trade - Global Trade Atlas®/HMRC

When the UK leaves the EU it is free to set it's own tariff schedule, provided it applies the same tariff to all of its trading partners (under the WTO's most favoured nation principle). If the UK decides to impose tariffs at the same level as the current EU common external tariff (CET) level, then frozen boneless beef and fresh cheese would have the highest tariffs ad valorem out of the products shown in Figure 4 and as the UK is a net importer of these products, this would provide a boost to domestic prices. Furthermore, the tariff on fresh boneless beef may not be the highest but is still relatively higher than the other products shown and represents a larger share of the food import value.

From a trade perspective, the sector facing the most challenges in a 'no deal' scenario is sheep meat. Tariffs under a 'no deal' Brexit would make exports uncompetitive, while imports are likely to be unaffected as they come into the UK under a TRQ. As the UK is mainly a net exporter of sheep meat, tariffs on exports would depress domestic prices and likely negatively affect the incomes of sheep farmers. Sheep meat is more likely to be affected than other sectors because a higher proportion of sheep meat is exported to the EU than non-EU destinations. Furthermore, sheep farmers are more restricted regarding alternative lines of production, as they are often in marginal areas with limited options for land use.

Beef is likely to be the main benefactor if tariffs are imposed on imports as domestic prices will increase. This may incentivise higher production, although carcase balance issues will need to be addressed. However, the UK may decide to lower tariffs or eliminate them entirely for some imported agricultural goods. AHDB has examined these possibilities in our Horizon publication: **Brexit Scenarios: An impact assessment**, but until more details are released from government, the exact impact for each sector cannot be calculated. AHDB will update its impact assessment as soon as information is available.

In the following sections of this report, we take a closer look at post-Brexit trade prospects for each of the UK's main agricultural sectors, as well as the current trading situation. (Background information on key topics such as tariffs, non-tariff barriers and tariff rate quotas is available in Appendix 1).



DAIRY

Patty Clayton
Lead Analyst
AHDB Market Intelligence

The UK is well placed for exports of premium products that are sold directly to consumers and where quality is key – a pack of mature Cheddar would be a good example. Products will have to be tailored with the end consumer in mind, ensuring flavour profiles and format align with their needs and consumption habits.

Global consumption of dairy is growing, with demand for fresh and processed products forecast to increase by 2.1% and 1.7% a year over the next decade respectively. Fresh products currently make up three-quarters of overall dairy consumption in developing countries, with consumption of processed products varying between regions. For some areas in Africa, Asia and the Middle East, consumption is growing at a faster pace than production and this is where potential opportunities lie for the UK.

China is the largest importer of dairy products and the growing middle class in the country have been introducing more dairy into their diet. Traditionally, dairy products don't feature in large quantities in Chinese diets, due to the high levels of lactose intolerance. So, products with a lower lactose content, such as butter and mature hard cheeses, are likely to provide a better opportunity for market development than fresh-milk products.

In August 2018, a new dairy trade deal between the UK and China, estimated to be worth £240 million over the next five years, was agreed. It allows the UK to export dairy products (excluding infant milk formula) that have been made with dairy ingredients (excluding raw milk) sourced from third countries. The agreement is designed to give more flexibility for UK dairy processors in sourcing ingredients for products targeted at the Chinese market.

Recently, frayed relationships between the USA and other global superpowers have introduced uncertainty into global markets. Both China and Mexico have introduced additional tariffs on a range of dairy products from the USA. This could potentially provide market access to the UK as both of these countries look to source products from elsewhere. There could be an opportunity for the UK to capture some of the USA's share in these markets, and if they remain competitive, this share could be retained once relations between the countries are resolved.

Canada also offers potential as an export market. The UK is currently the third largest exporter of dairy products to the nation, with butter and cheese being the main products. If the UK can maintain market access post-Brexit, there are potential opportunities for high-quality products such as cheese and butter.

Export opportunities for fresh milk and cream are limited due to the relatively short shelf life and relatively high water content, and so this could have an impact on wider trade links. However, milk powders, whey powders and hard cheeses all have comparatively long shelf lives. As a result, these products have a wider scope for export opportunities. Freezing butter is common, meaning it can be exported globally.

International competition from New Zealand, the world's largest exporting country (Figure 6) of dairy products, is likely to remain strong in the future. New Zealand also has a range of free trade agreements within the Asian markets, including China, is geographically closer to these markets and has the capacity to produce in-demand products.

As the likes of New Zealand have preferential access to these growing markets, the UK needs to be price- and/or quality-competitive depending on the market.

The UK also faces competition closer to home. Recently, the EU has been proactively gaining preferential access into markets through free trade agreements. Post-Brexit, the UK will be in direct competition with EU countries to capture market share.

In a 'no deal' Brexit scenario, tariffs on UK exports to the EU could cause particular issues for the cross-border trade with Ireland. Large volumes of raw milk in the UK are exported for processing in the Irish Republic and a proportion of the processed product is then exported back to the UK. Tariffs on UK exports to the EU and/or UK imports from the EU would likely make this trade with Ireland uneconomical.

Apart from tariffs, there could be delays for exports of products of animal origins. The UK will need to be listed as a third country by the EU and the lists of products for export to the EU will need approval. As the EU's response and timing regarding this is uncertain, this could potentially stop exports of dairy products to the EU for a period of time.

On the plus side, if tariffs are placed on UK imports of dairy products, import substitution could potentially be important for the dairy industry. While the UK has a trade deficit in some key dairy products, there's enough knowledge in the country to produce these (e.g. Cheddar, butter and yogurt). Investment in improving or expanding processing capabilities will be key to reduce the UK's reliance on imports and there are some examples of companies acting on this. For instance, in January 2018, Arla Foods announced a £72 million investment to be spent on improving processing facilities in the UK.

However, it should be noted that if tariffs on imported dairy products are reduced or eliminated then the opportunities for import substitution would be more limited.

For more information regarding opportunities for UK dairy trade, see the AHDB report, Meat and Dairy – Our Prospects in the global marketplace

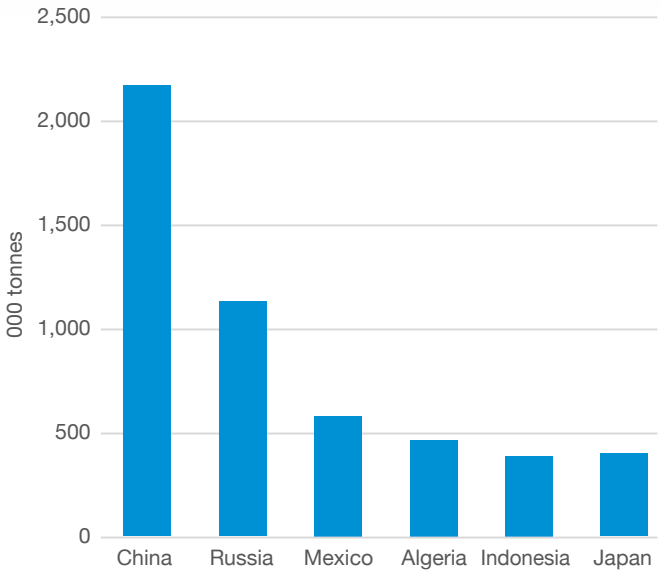


Figure 5. **Leading dairy importers (excluding EU), 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

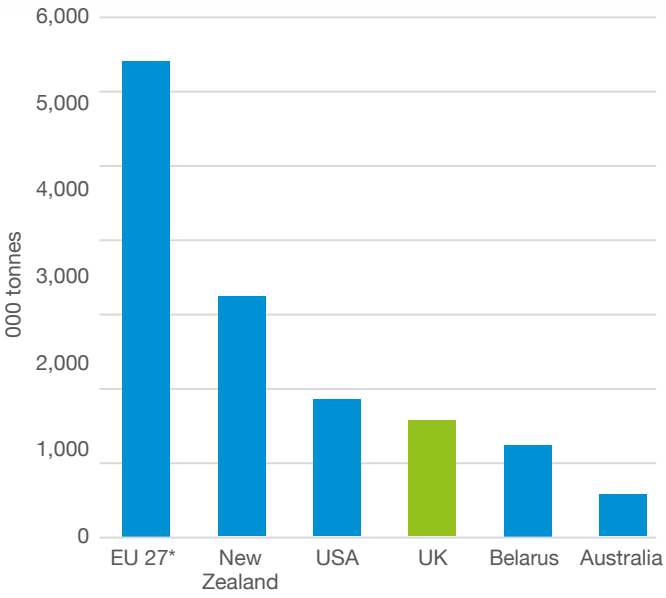


Figure 6. **Leading dairy exporters, 2017**

* Not including the UK

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

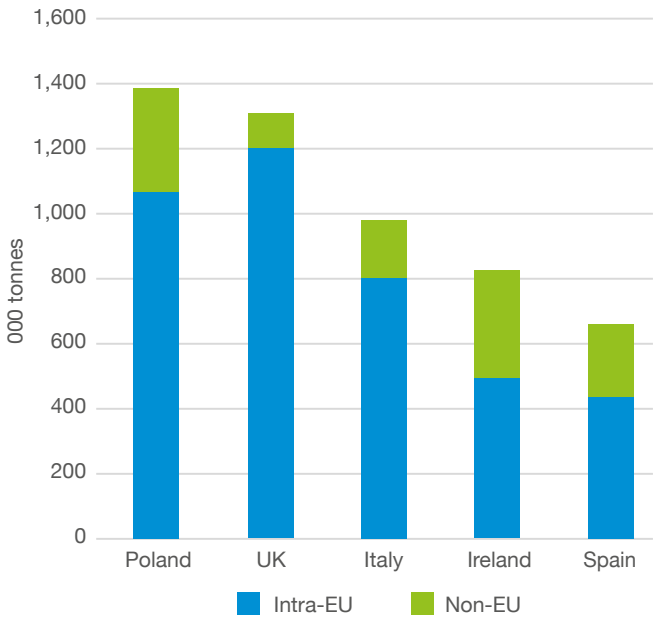


Figure 7. **Leading EU dairy importers, 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

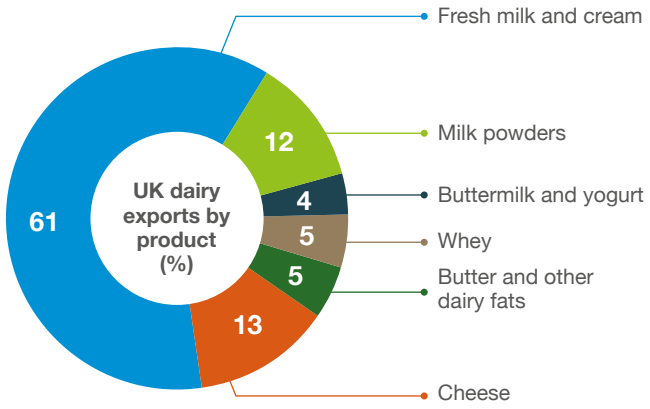


Figure 8. **UK dairy exports by product (2013-2017 average)**

Source: IHS Maritime & Trade-Global Trade Atlas®/HMRC

What's the current trade situation?

Between 2013 and 2017, the UK on average exported 1.1 million tonnes of dairy products per year, which equated to an average value of £1.3 billion. During this period, more than 90% of exports were shipped to the EU, highlighting the significance of the EU market to the UK dairy industry.

In volume terms, liquid milk and cream are the most significant export products for the UK dairy sector (Figure 8). Between 2013 and 2017, the UK exported on average 680,000 tonnes per year; however, the majority of this figure (92%) comprises movement across the Irish border. Most of the milk exported to Ireland is then processed and a proportion of the finished products will return to the UK market. Other exports of liquid milk are mainly UHT sales.

In value terms, cheese is the most significant export product for the UK dairy sector. The UK on average (2013–2017) exported 150,000 tonnes per year, with a value of £495 million. This trade is also dominated by the EU (83%), with Ireland and the Netherlands the main export destinations.

Cheddar is the largest exported cheese variety, in both value and volume terms. Between 2013 and 2017, Cheddar alone accounted for over half of all cheese exports and accounted for nearly 55% of the total value of exported cheese. Cheese exports have steadily increased over the past decade, with 2018 export volumes on track to be the largest on record; a reflection of the dairy sector as it looks to increase export volumes.

Exports of milk powders, including skimmed milk powder and whole milk powder, on average account for 12% of dairy exports. Ireland is the largest export destination, followed by the Netherlands, where a proportion may be exported to non-EU countries via the port of Rotterdam.

Exports to non-EU countries predominantly consist of cheese and powders. China in particular has become a significant export outlet. Exports of milk powders alone increased dramatically from just 180 tonnes in 2012 to 7,300 tonnes in 2017.

TOP 5 DESTINATIONS FOR UK DAIRY EXPORTS (2017)

Ireland 71%
Netherlands 8%
France 4%
Belgium 3%
Germany 2%

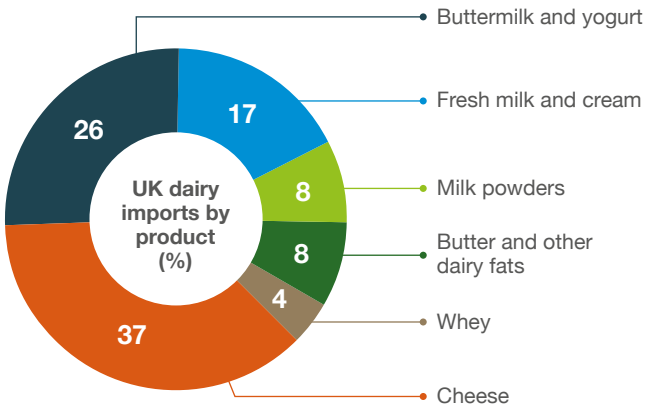


Figure 9. **UK dairy imports by product (2013-2017 average)**

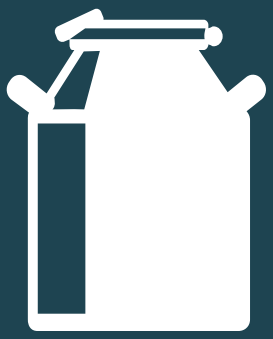
Source: IHS Maritime & Trade-Global Trade Atlas®/HMRC

Between 2013 and 2017, imports of dairy products remained relatively steady, averaging at just under 1.3 million tonnes a year. Similar to exports, the EU is the key trading partner, with nearly all (99%) dairy imports sourced from the bloc.

Cheese is the largest imported dairy product (Figure 9), of which Cheddar is the most common variety (the majority of which comes from Ireland). Over the five-year period, fresh speciality cheese (including mozzarella) made up 38% of all imported cheese, with France and Germany the main import origins.

Around a third of imported dairy products come from Ireland, of which a proportion will be made with milk from the UK. Between 2013 and 2017, the UK imported on average, 135,000 tonnes of cheese and 62,000 tonnes of butter from Ireland every year.

TOP 5 ORIGINS FOR UK DAIRY IMPORTS (2017)



Ireland 33%
France 18%
Germany 16%
Belgium 8%
Denmark 7%

TOP 5 ORIGINS FOR UK CHEESE IMPORTS (2017)

Ireland 28%
France 16%
Germany 14%
Denmark 10%
Netherlands/ Italy 8%

Across the five-year period, buttermilk, yogurt and other fermented dairy products (including kefir) on average accounted for 26% of total imports, with France, Germany and Belgium the main source nations. Of this, yogurt accounted for around 40% of the category, with an average of 133,000 tonnes of product imported every year during the period.

What does the domestic supply and demand situation look like?

Traditionally, dairy exports have been used as a means of clearing excess stock, surplus to demand in the domestic market (Figure 10, see page 15). Therefore, in a year when production is up, exports tend to follow accordingly.

Between 2013 and 2017, dairy product production generally increased, reaching just over 8 million tonnes in 2017, 3% (311,000 tonnes) higher than in 2013. There was however a sharp decline in 2016 following a decline in milk production due to adverse weather and low farmgate prices. During the same period, exports mirrored the production movements.

The UK has a trade deficit in dairy and is therefore a net importer of dairy products. The extent of this deficit is impacted by a number of factors including manufacturing capacity, availability of raw materials and consumer product preference.

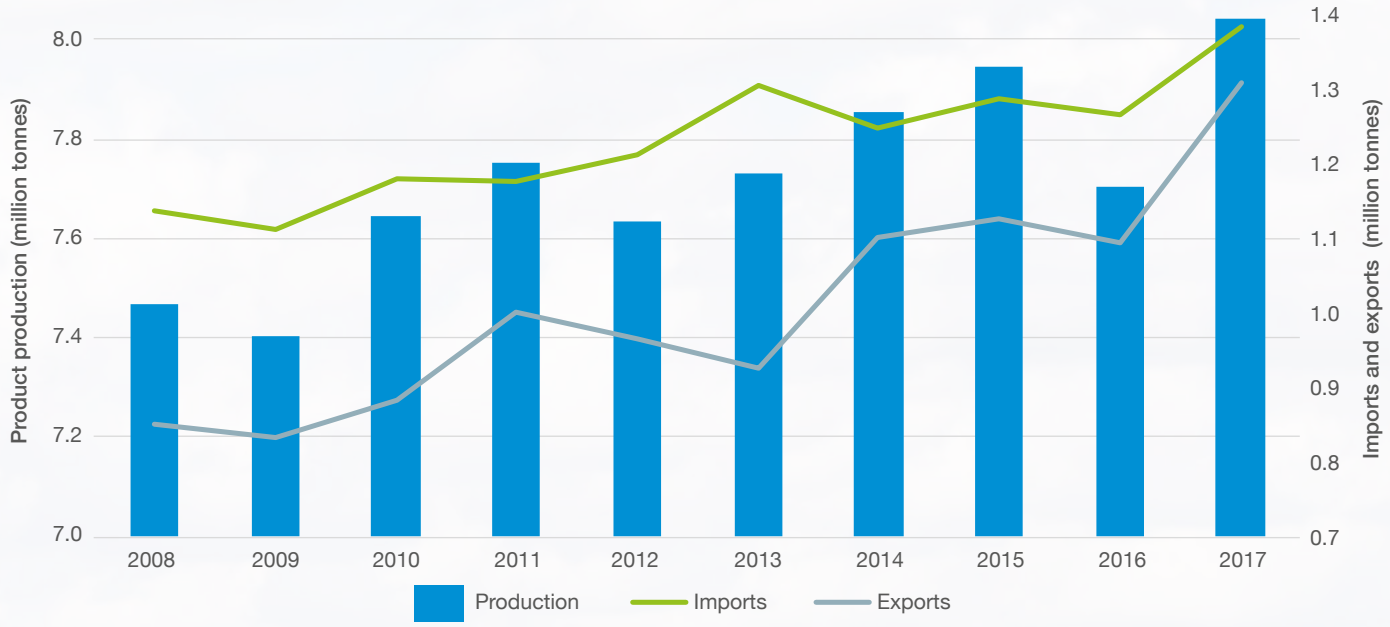


Figure 10. **UK dairy product production and trade**

Source: IHS Maritime & Trade - Global Trade Atlas®/HMRC//Defra

How do the UK's costs of production compare with its competitors?

Production costs for typical UK dairy farms sit around mid-table of the selected countries (Figure 11). As such, the UK is not the most price-competitive source of raw milk globally. This demonstrates the need for the UK dairy industry to improve efficiency in order for British products to compete on international markets.

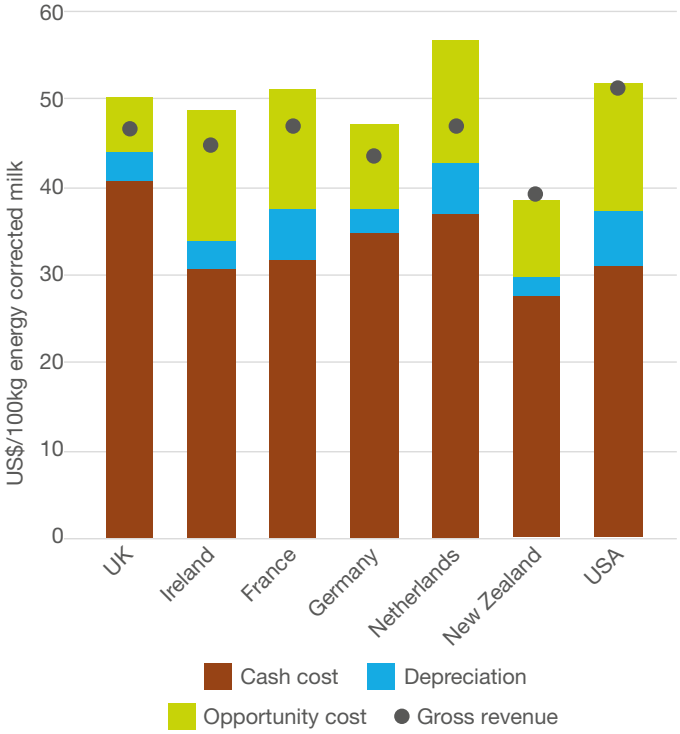


Figure 11. **Milk average* cost of production and revenue (2013-2017)**

*Average of representative farms in a given country, not the national average
Source: IFCN

AHDB's Optimal Dairy Systems programme is an example of tackling inefficiency in the British dairy industry. The aim of this work is to encourage farmers to make informed decisions about one of two production systems: block calving and all-year-round calving.

Total production costs for UK dairy farms are higher than the gross revenue, indicating there is still some reliance on subsidies. The recent Agriculture Bill stated that direct payments for England will be phased out over a seven-year period from 2021, giving the industry a timeframe in which it needs to improve efficiency.

If tariffs were implemented on UK dairy exports, shipments could be limited as they would be less price-competitive on the export market and therefore export revenues could see a decline. A lack of export demand could potentially weigh in on prices and, ultimately, profits. However, overall, the UK is a net importer of dairy products and so if the UK decided to place tariffs on imports, this would support domestic prices and help profitability (all else being equal).

Nevertheless, there is the opportunity for the UK to take advantage of more mature markets, where quality rather than price drives demand, with high-price premium items such as cheese and butter.

How could tariffs affect trade?

Most dairy products imported into the EU are subject to tariffs, which are usually fixed based on the product weight or weight of lactic matter in the product. The tariffs effectively mean that most non-EU exports are uncompetitive on the EU market.

Under a 'no deal' scenario, the UK would also be subject to these tariffs, which is likely to reduce the competitiveness of British products on the European market. With 91% of dairy-product exports destined for the EU, this would significantly impact the UK dairy industry.

Table 1 demonstrates the impact these tariffs could have. For example, exports of butter in less than 1 kg packaging would be subject to a €1,896 per tonne tariff.

How much the tariffs would actually impact prices is influenced by a number of factors, including the unit price and exchange rates. For example, in 2015, the tariff on butter in less than 1 kg packaging would have accounted for 63% of the unit price, whereas in 2017, it declined to 41%. This was due to a considerably higher unit price and a weaker sterling/euro exchange rate relative to 2015 levels.

The EU does, however, have a number of TRQs, mainly covering butter and cheese, which allow limited volumes of product to enter from non-EU countries at significantly reduced tariff levels. When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). Most dairy-product TRQs would be split in favour of the EU, with the exception of the New Zealand cheese for processing TRQ (4,000 tonnes) and Canadian Cheddar TRQ (4,000 tonnes)[1]. Comparing the typical level of UK cheese imports with the TRQs that may be available, it is possible that most UK cheese and butter imports would be subjected to the full tariff rates. However, no information is yet available regarding the rate at which UK import tariffs would be set in the event of a 'no deal' Brexit.

While geographical indications (GI) can offer some protection against lower-cost imports, the designation is dependent on EU laws. For the 18 registered GI cheeses currently made in the UK, continued protection will be dependent on a common agreement between the UK and the EU.

[1] Please note that these percentage splits could change in the future as negotiations are ongoing

Table 1. **Top 5 dairy products exported by the UK (2017) with effective ad valorem rate comparison (2015 and 2017)**

Code	Product	Tariff rate	Effective ad valorem (2015 export unit price)	Effective ad valorem (2017 export unit price)
04012099	Milk and cream, not concentrated or sweetened: Fat content 3-6%, in immediate packing of >2 litres	€21.8/100kg	74%	63%
04069021	Cheddar-(not grated or for processing)	€167.1/100kg	42%	40%
04012091	Milk and cream not concentrated or sweetened: Fat content 3-6%, in immediate packings of <=2 litres	€22.7/100kg	39%	42%
04021019	Milk and cream, not concentrate or sweetened in solid forms, unsweetened fat content <=1.5%, immediate packings >2.5kg	€118.8/100kg	63%	79%
04051019	Natural butter, fat content <= 85%, in packings >1kg	€189.6/100kg	63%	41%

If the UK wishes to register the protected cheeses post-Brexit with the EU, it would first need to set up its own national approval scheme. Only when products have been approved by a non-EU country's own national scheme can they be considered for approval under the EU protected food scheme. In the event of a common agreement, any GI-designated products would then also be protected by countries which have a free trade agreement or bilateral agreement with the EU.

Out of all of the EU member states, Ireland looks poised to be the most impacted in dairy terms, due to the nature of the border separating Northern Ireland from the Republic. As mentioned previously, the UK and Ireland deal in a lot of cross-border dairy trade, where raw milk is exported and the processed products subsequently imported. Therefore, the introduction of duties or any trade barriers would seriously impact dairy industries in both Northern Ireland and the Republic of Ireland.

BEEF

Duncan Wyatt
Lead Analyst
AHDB Market Intelligence

UK beef exports to non-EU destinations have increased recently, although they can struggle to be price-competitive. As a result, opportunities lie in exporting premium cuts, such as topside and fillets to China, for example, and promoting the UK's pasture-based production systems. Arguably, the biggest potential gain for UK beef exports could be for lower-value cuts and offal products, which have less value on the domestic market but are more highly valued elsewhere, for example in China and West Africa. This would likely improve overall returns to the UK industry as it improves carcase balance, using more of the animal.

We could see higher exports to China and Hong Kong in the future. Beef imports in these markets are forecast to increase considerably over the next few years. Good news for the UK is that China lifted its 20-year ban on beef imports in June 2018, imposed following the outbreak of BSE. The UK is now in market access negotiations, which typically take around three years, but in the five years after that the trade could be worth as much as £250 million.

It's worth bearing in mind that the UK will face strong competition from Australia and New Zealand – countries that already have free trade agreements with China in place. On top of that, production in some of the major global beef producers, such as the USA and Argentina, is expected to increase in the long term. Both of these countries benefit from economies of scale as their production becomes increasingly commercialised.

If tariffs are imposed on UK beef exports to the EU, exports will be limited considerably. The tariffs could be as high as the price of the product itself, if not more. This would really reduce the price competitiveness of UK beef on that market. In a 'no deal' situation, the UK would need to be registered

as a third country by the EU, with exports of beef and other products of animal origin needing to carry an export health certificate approved by the EU. Although the process is underway, there's no guarantee that the paperwork will be in place for exports to the EU to continue unhindered from 30 March 2019.

Overall, the UK is a net importer of beef and so any tariffs on imports could have a large effect on the domestic market. Most UK beef imports are from the EU, so if the UK decided to impose tariffs on these, domestic prices would very likely rise. This would probably improve beef farmers' margins (all else being equal), in turn incentivising higher domestic production.

If the UK decided against imposing tariffs on EU beef imports, it would be obliged to do the same for all beef imports, including those from outside the EU. This could lead to higher supplies and so lower domestic prices. For UK producers and processors, increased competition could lead to lower returns, especially for high-value cuts which drive much of the value in the domestic prime cattle market. The issue of food standards would be expected to play a part in future trade negotiations the UK has with other countries.

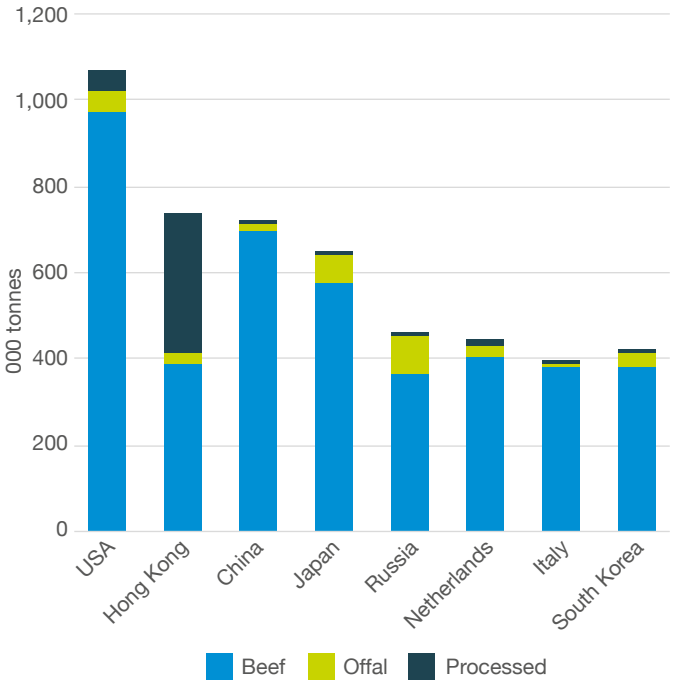


Figure 12. **Leading beef and veal product importers, 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

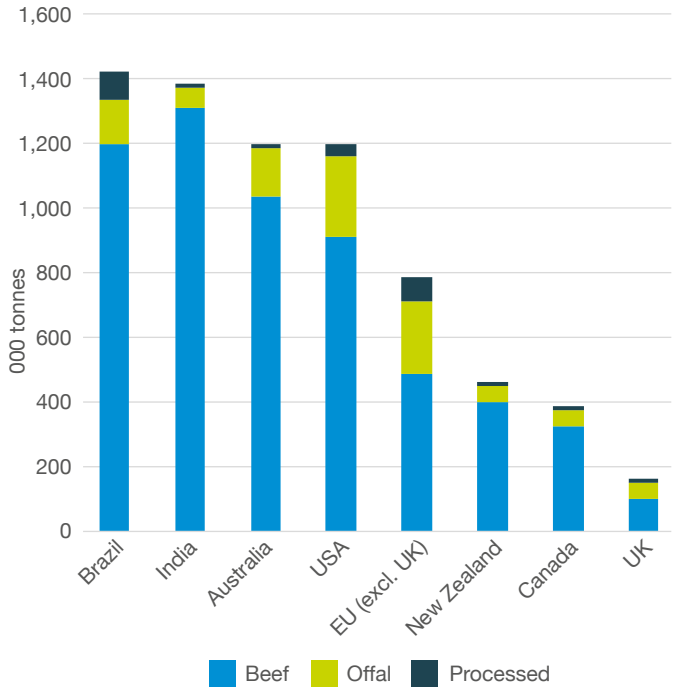


Figure 13. **Leading global beef exporters, 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local Customs data

For more information regarding opportunities for UK beef trade, see the AHDB report, Meat and Dairy – Our Prospects in the global marketplace

What's the current trade situation?

The UK exported an average of over 156,000 tonnes of beef and other bovine products per year between 2013 and 2017, equating to an average value of £456 million. Over this period, exports to the EU accounted for an average of 82% of all exports. Generally, exports still remain well below imports levels, which is an enduring effect of the BSE-related ban that was lifted in 2006.

Domestic demand is particularly strong for hindquarter cuts, e.g. sirloin, rump and flank. Although premium cuts account for some shipments, most beef exports are products that are further processed overseas due to limited domestic processing capacity, or products that have higher value in overseas markets, e.g. offal.

Fresh or chilled products are the most significant exports in both volume and value terms (Figure 14). The UK exported an average 84,000 tonnes a year between 2013 and 2017, with a value of £373 million. Within the category, there has been a move towards exporting cuts rather than carcases, particularly boneless cuts, as the added value during processing is retained on the domestic market.

TOP 5 DESTINATIONS FOR UK BEEF EXPORTS (2017)

Ireland 32%
Netherlands 23%
France 8%
Hong Kong 7%
Germany 5%

TOP 5 DESTINATIONS FOR UK OFFAL EXPORTS (2017)

Ireland 21%
Hong Kong 18%
France 9%
Germany 8%
Ghana 6%

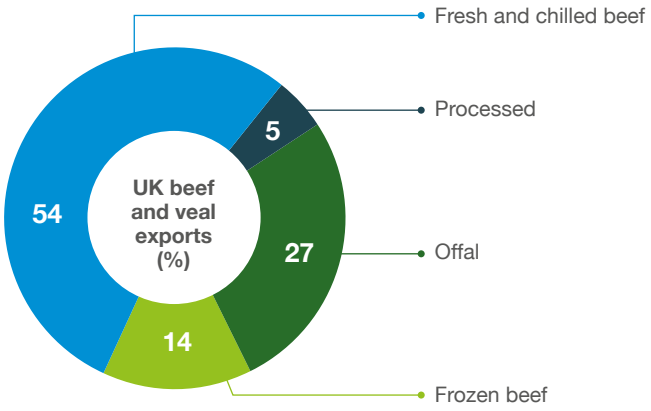


Figure 14. **UK beef and veal exports (2013-2017 average)**

Source: IHS Maritime & Trade-Global Trade Atlas®/HMRC

In recent years, offal exports have remained relatively steady at around 42,000–47,000 tonnes. This follows a period of growth after improved market access outside the EU.

Processed products make up around 5% of exports, which equates to around an average 8,000 tonnes or £27 million per annum (2013–2017). Processed exports were up by 38% year-on-year to 9,000 tonnes in 2017 and, as such, the overall value increased to nearly £35 million.

Although most UK beef exports are destined for the EU, there has been a growing proportion of exports to non-EU countries, demonstrating that exports are starting to shake off the impact of BSE.

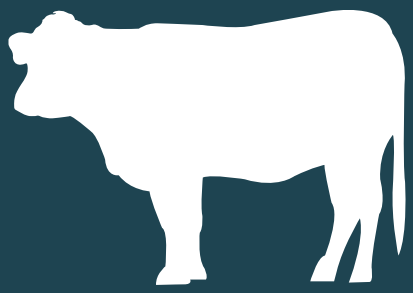
Ireland and the Netherlands are the key export destinations for UK beef, accounting for just over 50% of total exports (2013–2017 average). During the BSE years, the UK lost a significant proportion of processing capacity. As a result, carcases are exported for processing and some of the processed products return into the UK market. This is known as the 'carousel effect'. Some of the exports to the Netherlands may also be exported to non-EU countries, as a result of the 'Rotterdam effect'.

Hong Kong has been growing as a key export outlet in recent years, with exports having increased from 4,300 tonnes in 2013 to 14,500 tonnes in 2017. Frozen offal products make up around 66% of exports to Hong Kong.

The UK imported just over an average of 360,000 tonnes of beef and beef products between 2013 and 2017. In recent years, imports have remained relatively stable. On average, the value of imports is just under £1.3 billion per year.

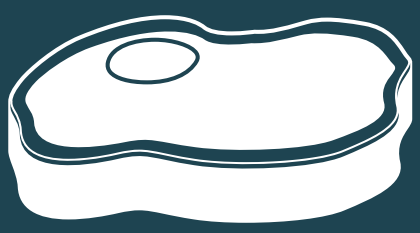
Imports from the EU accounted for an average of around 86% of the total (2013–2017). Ireland is the dominant supplier, with an average of 63% market share. A proportion of these imports, along with those from the Netherlands, is beef that is produced in the UK but exported for further processing.

TOP 5 DESTINATIONS FOR UK BEEF IMPORTS (2017)



Ireland 70%
Netherlands 8%
Poland 7%
Other EU countries 9%
Non-EU countries 6%

TOP 4 DESTINATIONS FOR UK PROCESSED BEEF IMPORTS (2017)



Ireland 46%
Brazil 25%
Poland 10%
Other EU countries 24%

Fresh and chilled meat made up the majority of imports (an average of 53%) between 2013 and 2017 (Figure 15), which mostly comprised boneless cuts that achieve higher prices as there is little or no further processing required and transports costs are lower. Fresh carcases accounted for around 10% of imported volumes.

On average, 85,000 tonnes of processed beef and offal products were imported (2013–2017), with an average value of £240 million. Ireland and Brazil supply the majority of processed product to the UK market, having around 43% and 32% (2013–2017 average) market share respectively.

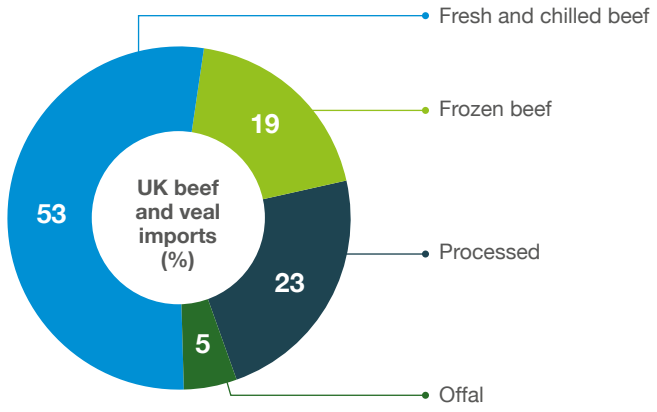


Figure 15. **UK beef and veal imports (2013-2017 average)**

Source: IHS Maritime & Trade-Global Trade Atlas®/HMRC

What does the domestic supply and demand situation look like?

UK beef and veal production increased from 847,000 tonnes in 2013 to 905,000 tonnes in 2017 (Figure 16). During this period, output increased year-on-year, except between 2016 and 2017. Both higher carcase weights and increased slaughterings have contributed to the overall rise in production.

The UK is a net importer of beef and around 75% self-sufficient in beef production. Mince is the most widely consumed type of beef in the UK and so the issue of carcase balance is less of an issue for beef compared with pork or sheep meat.

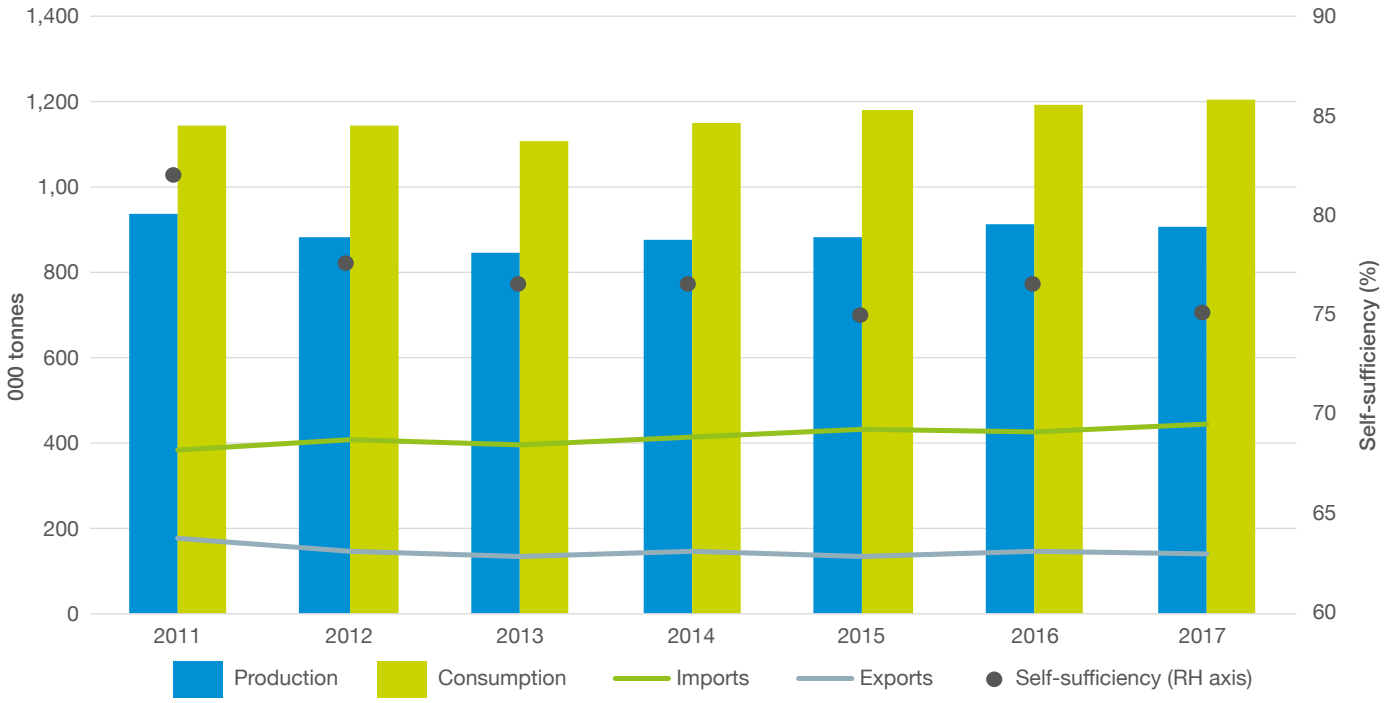


Figure 16. **UK beef supply and demand balance**

Data in carcase weight equivalent

Sources: Defra, IHS Maritime & Trade - Global Trade Atlas®/HMRC, AHDB

How could tariffs affect trade?

The majority of beef imports into the EU are subject to ad valorem tariffs of 12.8%, plus an additional fixed amount that can range from €1,414 to €3,041 per tonne, depending on the product. As shown in Table 2, these tariffs could account for well over 100% of the price per unit.

Under a 'no deal' scenario, UK exports could be subject to these tariffs, which would limit access to the EU market. At the time of writing (January 2019), no information is yet available regarding the rate at which UK import tariffs would be set in the event of a 'no deal' Brexit.

The EU already has a number of beef tariff rate quotas, to offer limited access for non-EU nations. The three global quotas that are most often utilised are the autonomous quota for grain fed beef, the 'Hilton' high quality beef (regulation 593/2013) and an *erga omnes* frozen beef quota (regulation 431/2008). Historically, some of the other quotas have been significantly underutilised, which may imply a lack of demand or other markets appearing more attractive in price terms.

There is also a range of non-tariff barriers that may limit market access into the EU – sanitary and phytosanitary (SPS) measures being the main non-trade barrier which are designed to protect consumers and give support to developing countries in improving food-quality standards. For example, there is a ban in Europe on beef from animals that have been treated with hormones, which is a common practice in some exporting nations.

When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). As it stands, the EU will have access to the largest proportion of most beef TRQs. However, the Australian TRQ (7,150 tonnes) is split 65% in favour of the UK and the *erga omnes* TRQ (63,703 tonnes bone in weight) is split 69% in favour of the UK[2]. Given that the UK typically imports around 400,000 tonnes of beef carcase weight equivalent (CWE), it is likely that a considerable portion of imports would be subject to full tariff levels out of quota.

Table 2. **Selection of top beef commodities exported by the UK (2017) with effective ad valorem rate comparison (2015 & 2017)**

Code	Product	Tariff rate	Effective ad valorem (2015 export unit price)	Effective ad valorem (2017 export unit price)
02013000	Fresh or chilled – Boneless Cuts	12.8% +€303.4/100kg	65%	65%
02023090	Frozen - Other boneless cuts	12.8% + €265.3/100kg	89%	113%
02011000	Fresh or chilled- Carcases or half carcases	12.8% + €212.2/100kg	84%	113%
02012090	Fresh or chilled - Other bone-in cuts	12.8% +€265.3/100kg	48%	61%
02012050	Fresh or chilled- Unseparated or separated hindquarters, bone-in	12.8% + €212.2/100kg	70%	70%

[2] Please note that these percentage splits could change in the future as negotiations are ongoing.

How do the UK's costs of production compare with its competitors?

The UK, along with many other countries, struggles to make a profit from beef finishing. Figures 17 and 18 show beef finishing cost of production data for typical farms in selected countries. The number after the country name indicates the total number of animals finished per year.

For beef farms finishing their own suckler calves, the latest data reveals that the UK's production costs are higher compared with the other countries shown, with revenue lower than cash costs. Higher labour costs and greater machinery and building investment by UK farmers are the main factors behind this.

For farms finishing purchased calves, the picture is somewhat better, but the UK struggles to compete with the likes of Brazil and the USA, where commercial beef finishing businesses will employ feed-purchase strategies and only purchase cattle on the basis of making a profit. As a result, the UK will struggle to compete with Brazilian and US beef on the global commodity market and will need to differentiate its product. The UK's reputation for producing high-quality produce at high standards is likely to be attractive for markets where low price is not the most important factor.

If tariffs were imposed on UK beef exports to the EU, but beef imports into the UK were tariff-free, this would lead to lower domestic beef prices and so squeeze margins further for beef finishing. However, if tariffs were applied on both UK beef exports and imports, as the UK is a net importer of beef, the overall effect would be an increase in domestic beef prices and so lead to improved margins, if all else remained equal.

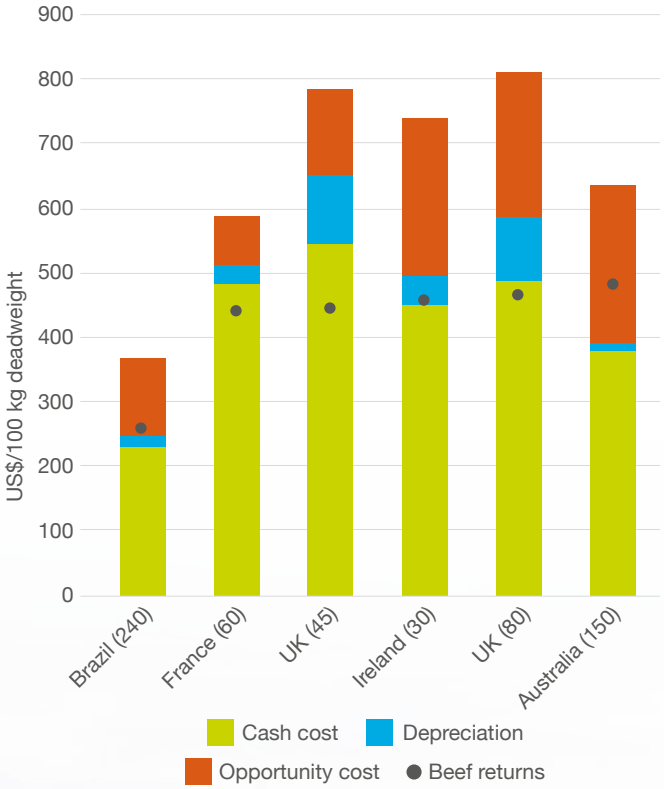


Figure 17. **Beef farms finishing own suckler calves 2017**

Source: agri benchmark

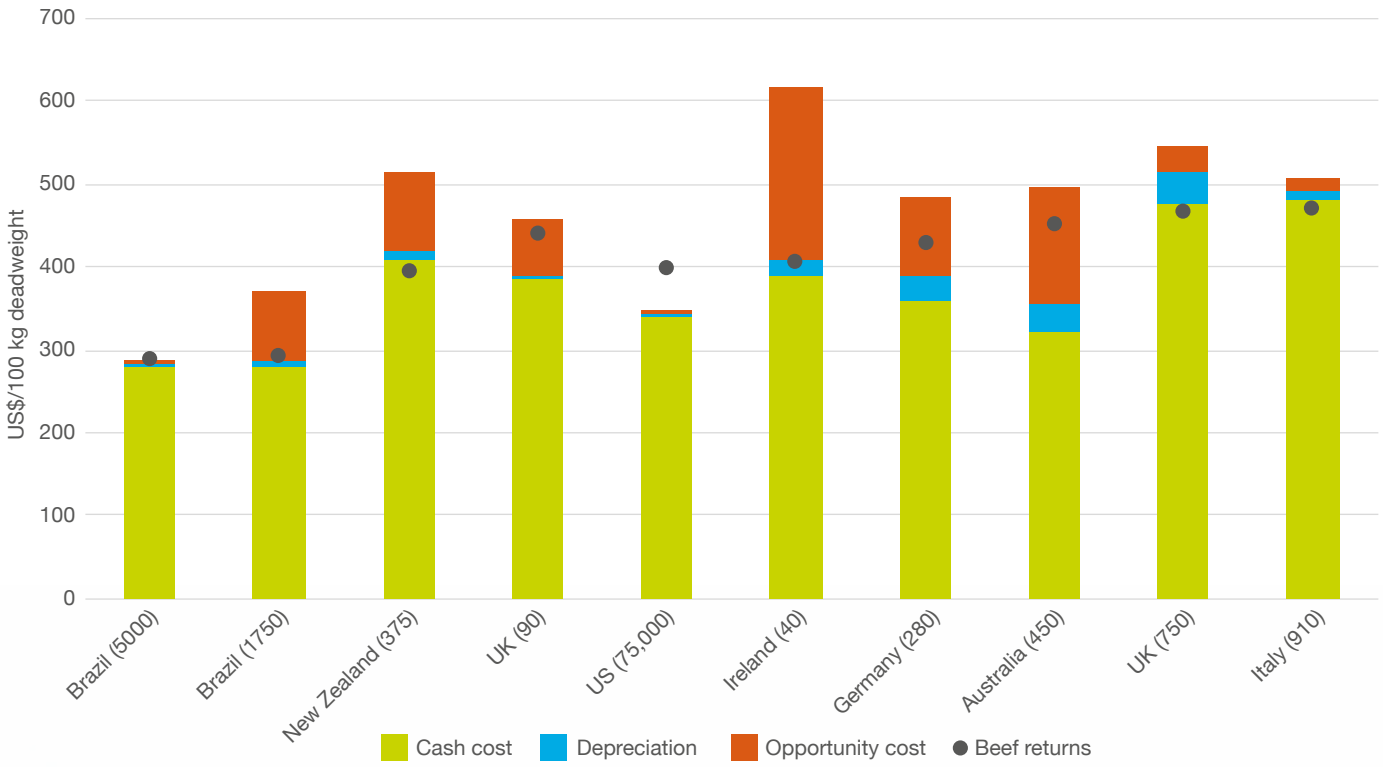


Figure 18. **Farms finishing purchased calves 2017**

Source: agri benchmark

SHEEP MEAT

Rebecca Oborne
Analyst
AHDB Market Intelligence

UK sheep meat exports could suffer considerably if tariffs come into play. Carcases make up an important part of what the UK exports to the EU and could potentially be facing tariffs as high as 45-50% of the price of the meat, which would be a blow to our price competitiveness on the export market. Various modelling work, including AHDB's Brexit Scenarios: An impact assessment, have shown that domestic prices of sheep meat are likely to fall under these circumstances and considerably reduce the incomes of sheep farmers.

Not only is this a major threat for the UK sheep sector, but there is also the possibility that UK sheep meat exports to the EU could be slowed down dramatically if the necessary export health certification process is slow or cumbersome. The EU will have to approve the UK as a third country to allow it to export products of animal origin to the bloc and the speed at which this process can take place will depend on the EU. If the UK leaves the EU in a 'no deal' situation on 29 March 2019, then at the moment there is a big question mark for sheep meat exports. Tariffs and export health certification may also disrupt cross-border Irish trade as around 40–50% of lambs from Northern Ireland are sent to slaughter in the Republic.

There are, however, some opportunities for UK sheep meat exports to non-EU destinations, especially with the estimated surge of the middle classes in the Asia–Pacific region. The UK could potentially see sheep meat exports to Japan, following inspections by Japanese officials in summer 2018. Discussions regarding access to the Chinese market for UK sheep meat are also getting underway. There's also the potential to expand the UK's exports of sheep offal to China, as well as to other Asian and African markets.

For sheep meat, however, we need to bear in mind that the UK would face strong competition from New Zealand and Australia, given their proximity to the Asian market and the fact that their costs of production are lower than that of the UK, although there may be a limit to how much output could increase even in these countries. Looking towards the West, the USA and Canada could also offer some prospects for exports of premium cuts, but the fact remains that if the UK is unable to competitively supply sheep meat to the EU from the end of March 2019, there's no other outlet that could come close, where volume is concerned, at least in the near-term.

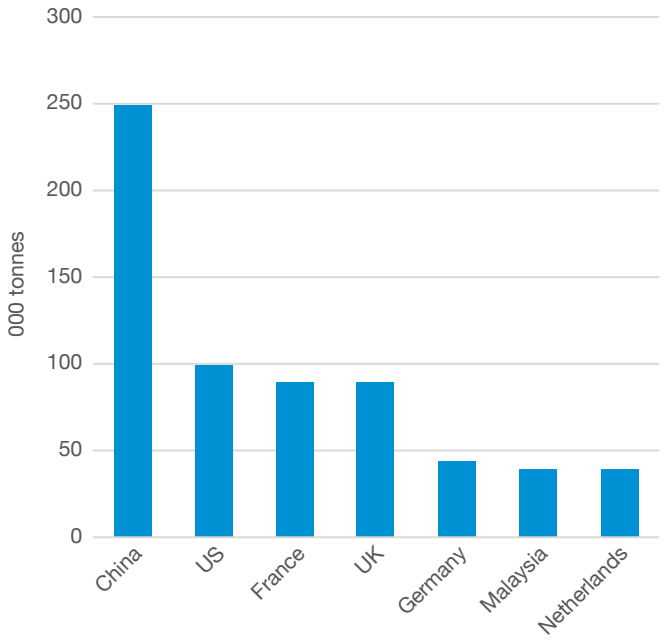


Figure 19. **Leading sheep meat* importers, 2017**

*Including offal
Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

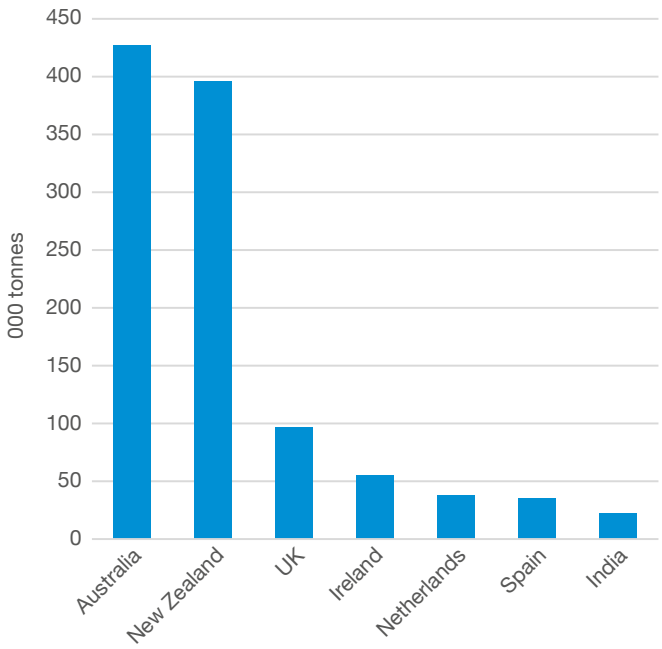


Figure 20. **Leading sheep meat* exporters, 2017**

*Including offal
Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

What's the current situation for trade?

UK sheep meat exports were slightly above the five-year average in 2017 (Figure 21) and worth £392 million. The EU is the main destination for UK sheep meat exports, accounting for an average of 89% of total exports between 2013 and 2017. France and Germany are the UK's main EU trading partners for sheep meat exports. However, there are doubts over the accuracy of trade data from 2015 onwards, especially for exports to France, which are suspected to be higher than official figures show.

The main non-EU export market for UK sheep meat is Asia, accounting for an average of 78% of all non-EU exports (2013–2017). Exports are dominated by carcases (Figure 22), which have had an average value of £233 million. While offal exports comprise a much smaller share of UK sheep meat exports, they have grown in recent years. Offal exports to Asia reached over 230,000 tonnes in 2017, more than seven times higher than in 2013 and accounting for 42% of all offal exports.

For more information regarding opportunities for UK sheep meat trade, see the AHDB report Meat and Dairy – Our prospects in the global marketplace

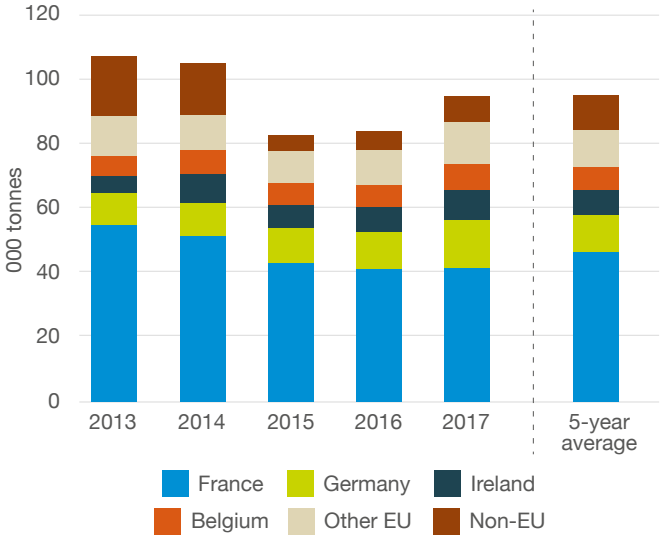


Figure 21. **UK sheep meat exports**

NB: There are doubts over the accuracy of sheep meat export data from 2015 onwards, as exports are suspected to be higher than what the official figures show. Source: HMRC

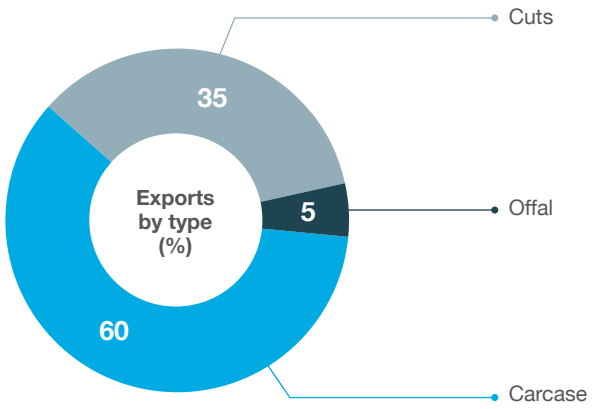


Figure 22. **Exports by type (five-year average, 2013–2017)**

Source: HMRC

UK sheep meat imports are dominated by shipments from Oceania. Over the past five years, imports from New Zealand have accounted for an average of 74% of all imports (Figure 23). New Zealand's seasonality of sheep meat production is the opposite to that of the UK and so imports from the country help to satisfy UK consumption when domestic production is low. Imports from the EU only averaged 10% from 2013 to 2017, with Ireland the main European supplier.

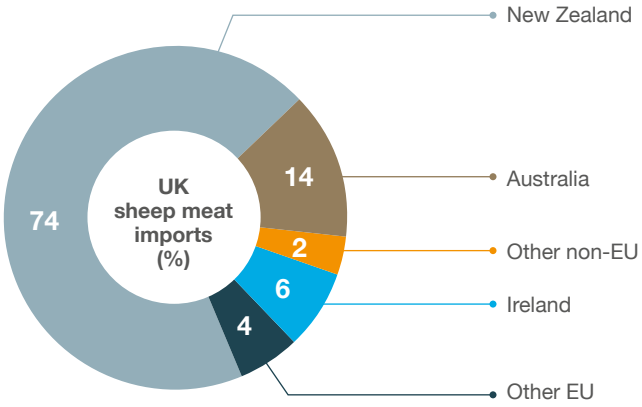


Figure 23. **UK sheep meat imports (average 2013–2017)**
Source: HMRC

Unlike for exports, imports are dominated by cuts. On average, sheep leg imports over the past five years have comprised 44% of all imports of sheep meat cuts (Figure 24).

Most sheep meat imports are frozen products. On average (2013–2017), 62% of sheep meat imports were of frozen goods. In contrast, 83% of all sheep meat exports were fresh products (2013–2017 average).

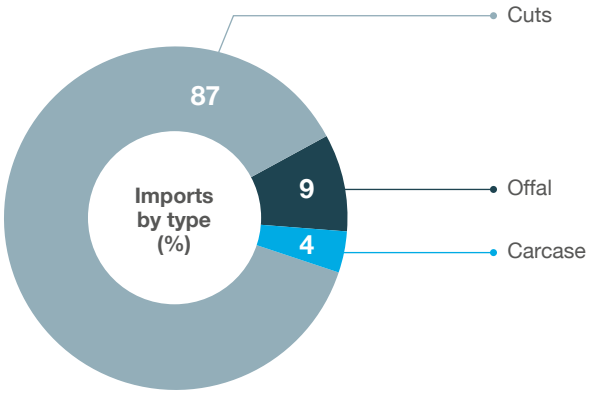


Figure 24. **Imports by type (five-year average, 2013–2017)**
Source: HMRC

What does the domestic supply and demand situation look like?

Sheep meat production is seasonal, with peak UK production around October/November and a trough in production around April/May. UK sheep meat production was fairly stable between 2013 and 2017, at around 290,000 – 300,000 tonnes (Figure 25). While domestic consumption levels of sheep meat have mostly been in excess of production, in 2017 the supply and demand balance was more evenly matched.

The UK's self-sufficiency in sheep meat increased to almost 100% in 2017 – the highest since 2014. However, as with the other meat categories, it is important to remember that not all of the sheep meat that is produced is in demand by domestic consumers. As discussed earlier, sheep leg imports comprise a considerable portion of sheep meat imports, reflecting that domestic production is insufficient to satisfy UK consumption levels. However, if production of sheep legs is increased, then this will also lead to an increase in other cuts and sheep meat products, for which there may not be enough demand and so would need to be exported.

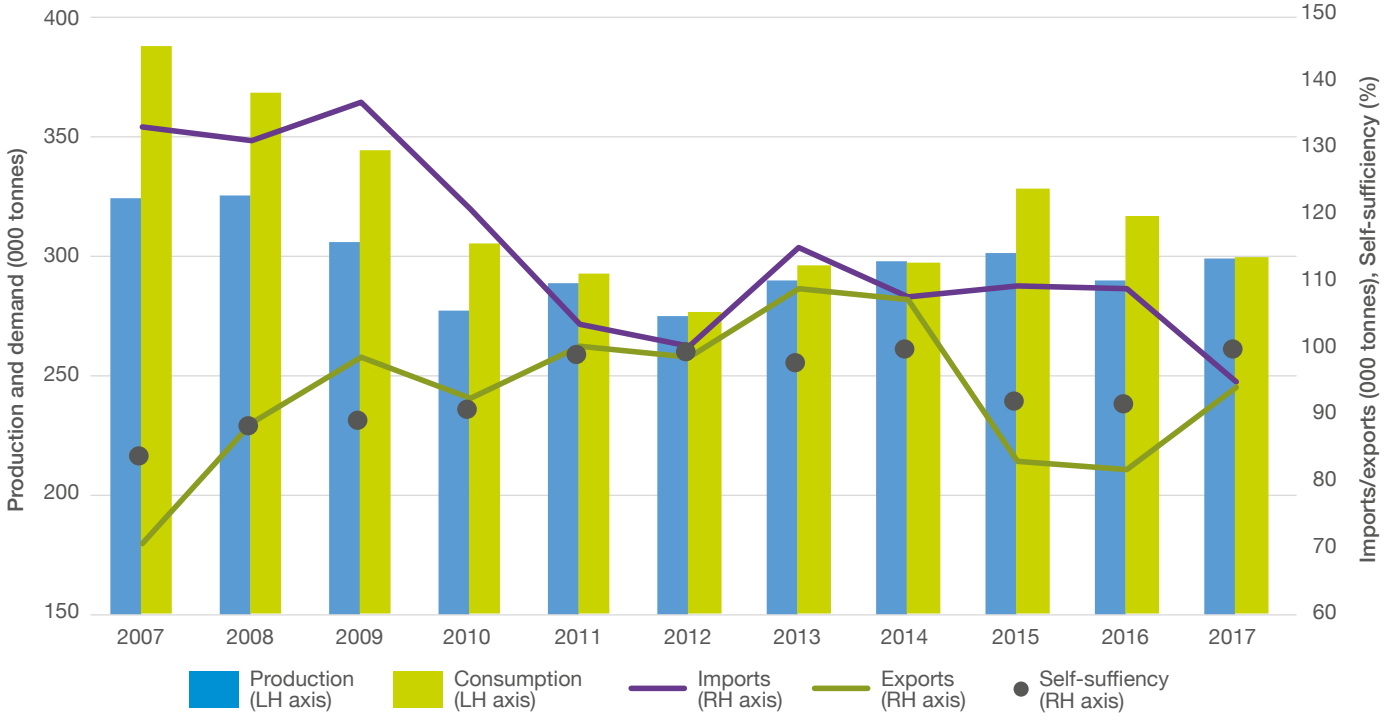


Figure 25. **UK sheep meat balance**

Trade figures converted to carcase weight equivalent
Source: Defra, HMRC, AHDB

How could tariffs affect trade?

Tariffs imposed on sheep meat (out of quota) consist of an ad valorem tariff of 12.8%, plus a fixed amount which varies according to the product. Frozen short forequarters have the lowest fixed amount portion of the tariff (€902/t), whilst fresh/chilled boneless cuts have the highest (€3118/t). There are no tariffs on sheep offal.

Under EU rules, certain countries can send sheep meat at a zero or reduced import tariff under a negotiated quota, while others must continue to pay to enter the market. In total, 285,260 tonnes carcase weight equivalent (CWE) of sheep meat can be sent in under quotas. Of these, New Zealand has the highest allocation – 228,254 tonnes CWE – although it only utilised 62% of this in 2017, down 14 percentage points from 2016, according to the latest data from the European Commission. Australia's allocation is 19,186 tonnes CWE, which it used completely in 2017. In 2015 and 2016, Australia utilised 99% and 96% of its quota respectively.

When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). For sheep meat imported from New Zealand, the TRQ will be split evenly between the EU and the UK, while the UK will be allocated 80% of the TRQ for sheep meat imports from Australia (20% for the EU). New Zealand and Australia have both expressed their opposition to these splits. As negotiations with third countries affected are still ongoing, these TRQ allocations may change in the future.

If this method is agreed and put in place, then the UK could continue to import sheep meat from New Zealand at current levels tariff-free.

Outside TRQs, and if there is no trade deal in place, sheep meat exports will be subject to tariffs under the WTO third-country basis. The table below shows how the overall effect of tariffs can change. The unit price of the commodity, as well as the euro/pound exchange rate, can exacerbate the net impact, as can be seen for frozen sheep and lamb carcases.

In a 'no deal' scenario, the UK would be subject to EU third-country tariffs on sheep meat imports under WTO rules, which would make it uneconomical for the UK to supply sheep meat to the EU. As a result, higher supplies of sheep meat on the domestic market will put downward pressure on UK prices. Market access to non-EU countries is likely to be difficult, based on the competition from top exporters, Australia and New Zealand.

As well as the possibility of UK sheep meat exports facing prohibitive tariffs, there is also the issue of having recognised export health certification in place post-Brexit, without which trade between the EU and UK would not be possible. Under a 'no deal' scenario, the UK will need to be listed as a third country by the EU and lists of products for export to the EU will need approval. As the EU's response and timing regarding this is uncertain, this could potentially stop exports of sheep meat to the EU for a period of time.

Table 3. **Top sheep meat products exported by the UK (2017) with effective ad valorem rate comparison (2015 and 2017)**

Code	Description	Tariff rate	Effective ad valorem (2015 export unit price)	Effective ad valorem (2017 export unit price)
02041000	Fresh/chilled lamb carcase	12.8% + €171.3/100 kg	46%	48%
02042100	Fresh/chilled sheep carcase	12.8% + €171.3/100 kg	45%	48%
0204225010	Fresh/chilled sheep legs	12.8% + €222.7/100 kg	42%	43%
0204300010	Frozen lamb carcase	12.8% + €128.8/100 kg	32%	47%
0204410010	Frozen sheep carcase	12.8% + €128.8/100 kg	25%	37%
02044250	Frozen sheep legs	12.8% + €167.5/100 kg	39%	42%

How do the UK's costs of production compare with its competitors?

UK costs of production for sheep meat are markedly higher, compared with New Zealand and Australia (Figure 26). Producers in New Zealand and Australia therefore have more flexibility in maintaining a better margin for their sheep meat.

China, the world's largest sheep meat importer, imposes ad valorem tariffs of 12–15% on lamb and 23% on mutton imports. However, China has free trade agreements in place with both New Zealand and Australia. New Zealand has tariff-free access to the Chinese market, while Australia will have reduced tariff access until 2023, followed by tariff-free access. This further highlights the challenges the UK faces in order to compete with these top exporters.

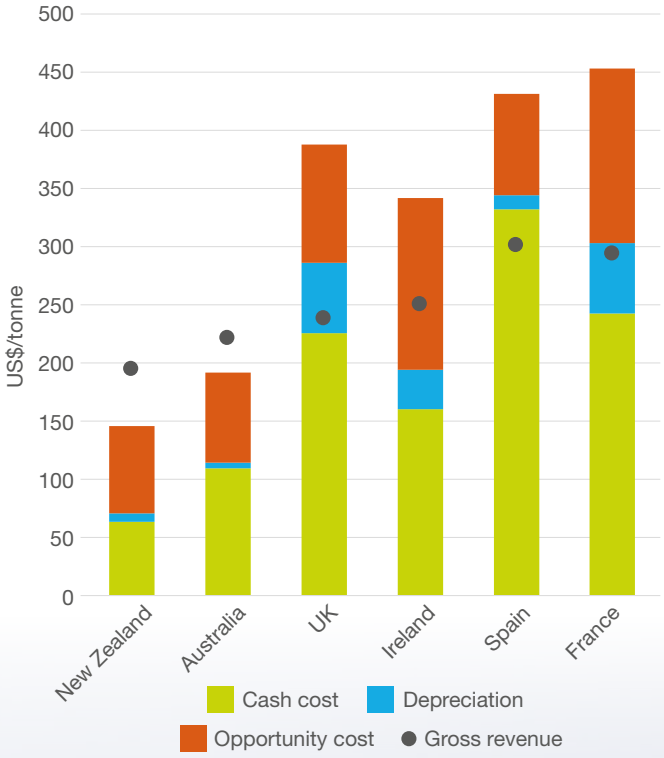


Figure 26. **Sheep meat average* cost of production and revenue (2017)**

*Average of representative farms in a given country, not the national average
Source: agri benchmark

PORK

Bethan Wilkins
Analyst
AHDB Market Intelligence

The South East and East Asian countries offer a significant opportunity for UK exports of lower-value pork cuts and offal. China is the largest consumer of pork and offal globally and could hold great potential for UK exports.

Brexit is approaching the British pig industry at a time of considerable uncertainty for the global pork market. African Swine Fever (ASF) was discovered in China in August 2018 and this has caused significant disruption. Restrictions on stock movement have resulted in areas of under- and oversupply, and this has the potential to boost Chinese import requirements over the coming year, though to what extent remains uncertain. The UK may be able to capitalise on growing demand, especially considering the ongoing trade tensions between the USA and China. The USA has been a significant supplier of pig offal to China in particular, with a third of the market share in 2017. Nonetheless, there will still be competition from Brazil and EU member countries.

With the scale of the Chinese opportunity remaining unclear, it is important to remember there are other potential destinations for low-value cuts, including the Ivory Coast, Taiwan, Singapore, South Africa and South Korea.

Japan is the second largest importer of pork and offal outside of countries within the EU. The Japan–EU Economic Partnership Agreement (JEEPA) concluded in 2017 and involves the reduction of import tariffs over a 10-year period. But once the UK leaves the EU, it won't be able to enjoy the benefits of this trade deal. If a close trading relationship between the UK and EU is maintained, any boost in demand for EU pork, and support to prices, could trickle through into the UK market.

For exports of premium pork products, the opportunities may be more limited. Hong Kong and the USA perhaps hold the greatest potential in this area. Canada, India and South Korea could also be possible outlets, and there's perhaps a chance of tapping into the high-quality foodservice sector in China and Japan.

Elsewhere, competition for export markets from low-cost producers is a major threat. Great Britain has some of the highest costs of production for pig meat globally, which can put it at a disadvantage when competing on the export market.

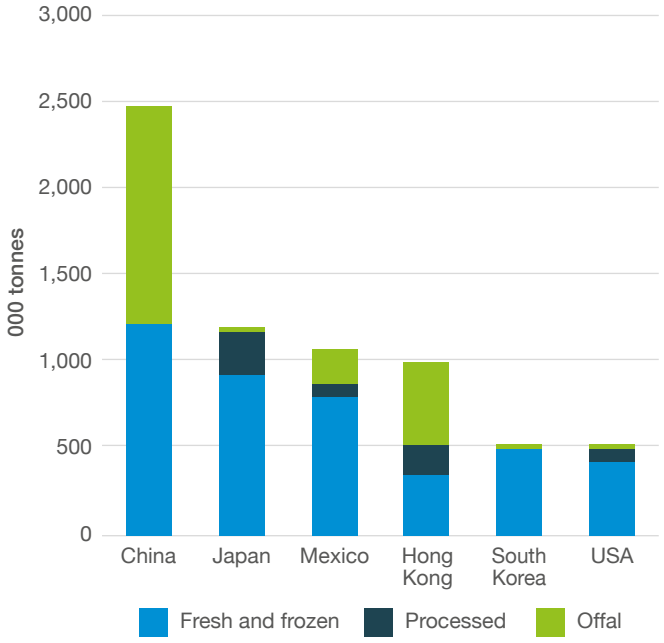


Figure 27. **Leading global non-EU pork importers (2017)**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

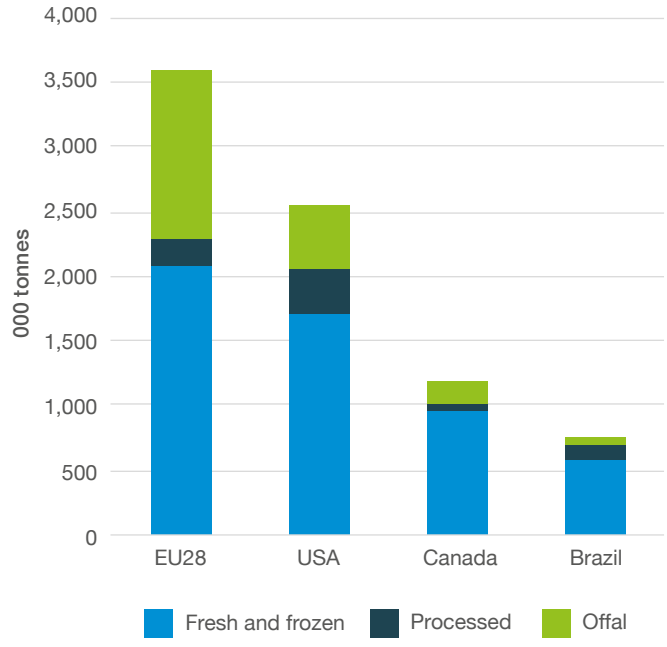


Figure 28. **Leading global pork exporters 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

While ASF in China may present export opportunities, the disease nonetheless currently represents a very real threat in the global pig meat market. In September 2018, ASF was identified in Belgium, the first time it has entered Western Europe for a decade. Further spread is clearly a concern as, aside from technical challenges, exports are disrupted, with some key importers outside of the EU typically blocking pork from affected countries altogether. The potential for further spread in Europe represents a risk for the whole EU pig market, and the UK if close trading relations are maintained, as infection in a large exporter (such as Germany) could disrupt the overall EU market balance. Of course, if this disease makes it across the Channel, it has the potential to significantly disrupt the UK pig sector.

Commercialisation of domestic pig industries in potential export markets, such as China, is a long-term threat. Some developing nations are investing heavily in domestic pork industries, moving away from 'backyard' farms with a few pigs to larger, more commercial enterprises. As these countries become more self-sufficient in pig meat production, their reliance on imports may reduce.

In the event of a 'no deal' Brexit, the EU would regard the UK as a third country and impose tariffs on imports from the UK. This would considerably lower the competitiveness of UK pork exports to the EU. On the other hand, if the UK decided to apply tariffs on UK pork imports, then it is likely that domestic prices would increase as the UK is a net importer of pig meat, which could incentivise higher production. Carcase balance would likely be a challenge, though. In addition, currently the UK exports sow meat to Germany, which is processed into products such as continental sausages. If tariffs were in place on exports, this would be uneconomical. If this became a long-term situation, there might be potential for further processing to occur in the UK.

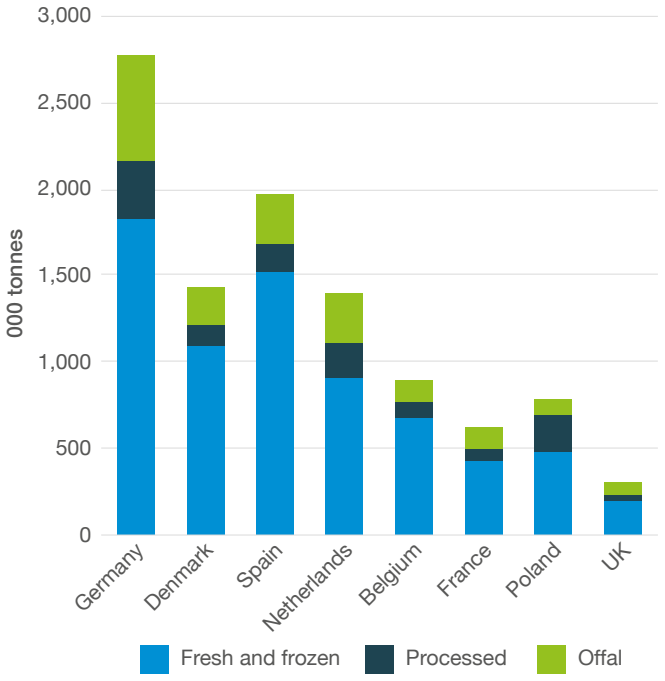


Figure 29. **Leading EU pork exporters, 2017**

Source: IHS Maritime & Trade-Global Trade Atlas®/Local customs data

What's the current trade situation?

Between 2013 and 2017, exports of pig meat increased by 29%, to stand at 335,000 tonnes in 2017 (Figure 30). During this period, the value of exports grew by 43%, increasing from £330 million in 2013 to £470 million in 2017. Exports of fresh and frozen pork have accounted for the majority (66%) of overall pig meat exports between 2013 and 2017 (Figure 31).

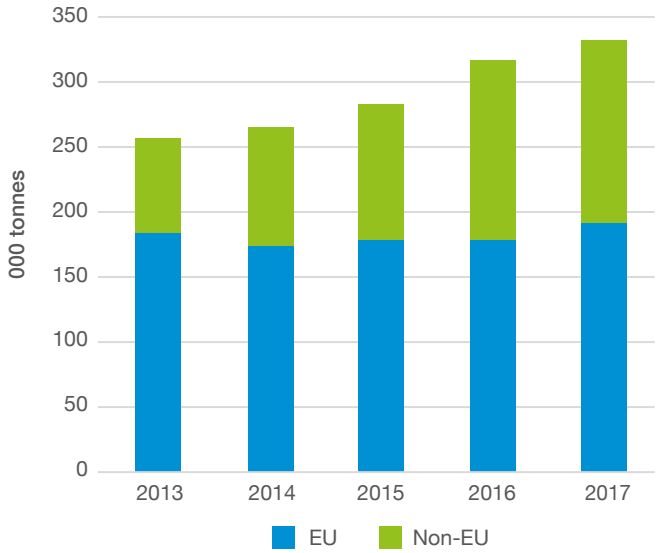


Figure 30. **UK exports of pig meat including offal**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

The proportion of exports shipped to the EU has been in decline in recent years. In 2013, 71% of pig meat exports were to EU member states. However, this declined to 58% by 2017, demonstrating the growing importance of exports to non-EU destinations.

Within the EU, Ireland, Germany and Denmark are the main destinations for UK pork. Much of the pork exported into Denmark is destined for further export, reflecting the nature of the EU ownership of some UK processor plants. There is a similar situation with exports into Netherlands, known as the 'Rotterdam effect'.

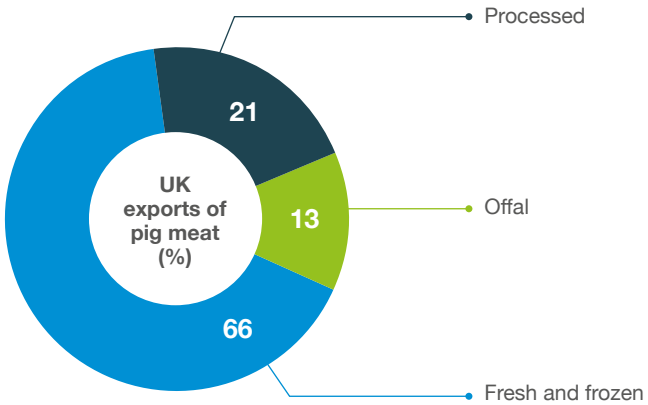


Figure 31. **UK exports of pig meat by industry (2013–2017 average)**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

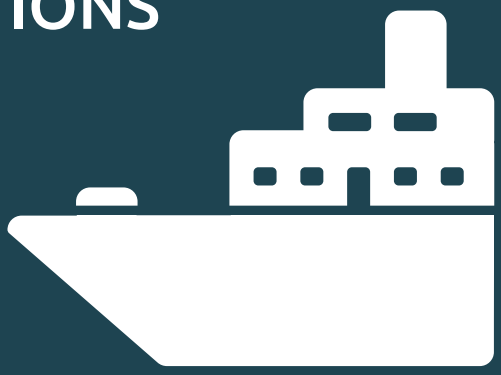
TOP 5 DESTINATIONS FOR UK PORK EXPORTS (2017)

China 19%
Germany 15%
Ireland/Denmark 14%
Netherlands 8%
Hong Kong 5%

TOP 4 DESTINATIONS FOR UK PROCESSED PORK EXPORTS (2017)

Ireland 66%
Spain 11%
Other EU countries 19%
Non-EU countries 4%

TOP 5 DESTINATIONS FOR UK OFFAL EXPORTS (2017)



China 40%
Hong Kong 21%
Netherlands 9%
Philippines 8%
Denmark 6%

Most UK sow meat is exported due to low domestic demand. Of the exports the UK sends to Germany, the majority comprised of sow meat, which is processed into products such as continental sausages. A proportion of this product may then be exported back to the UK market.

Over the last decade, offal exports have more than tripled due to improved market access outside of the EU, where demand for these products is much greater. In 2017, offal accounted for 24% (81,000 tonnes) of total exports, compared with 16% in 2013. Exports in 2018 were on track to surpass 2017 levels.

Exports to China accounted for nearly a quarter of all exports in 2017, of which 44% were offal products. In 2013, China accounted for 12% of UK pig meat exports, highlighting its importance as a key emerging market.

Elsewhere, exports to the Philippines and the USA have grown sharply over the past few years. In 2017, the UK exported nearly 11,000 tonnes of pork and offal to the Philippines, making it the seventh largest export outlet. Export volumes have increased fourfold over the past five years, fuelled by increasing per capita consumption in the South East Asian country.

Processed pork products, comprising mainly bacon, sausages and hams, have accounted for nearly a quarter of exports over the last five years. Shipments to Ireland account for the majority (66%) of processed pork exports.

The UK is a net importer of pork and processed products. Between 2013 and 2017, the UK on average imported 920,000 tonnes of pig meat (including offal), with over 99% sourced from the EU.

Processed pork products have accounted for just over half of total imports (Figure 32), with bacon, sausages and hams cumulatively accounting for over 90% of the category. This is a reflection of the British pork industry, as it does not have the processing capacity or the herd size to satisfy domestic demand for these products. Furthermore, the UK does not have enough pigs to meet the country's consumption levels, especially for favoured cuts. Meanwhile, on average, fresh and frozen pork accounted for 43% of total imports between 2013 and 2017, of which the majority were fresh or chilled products.

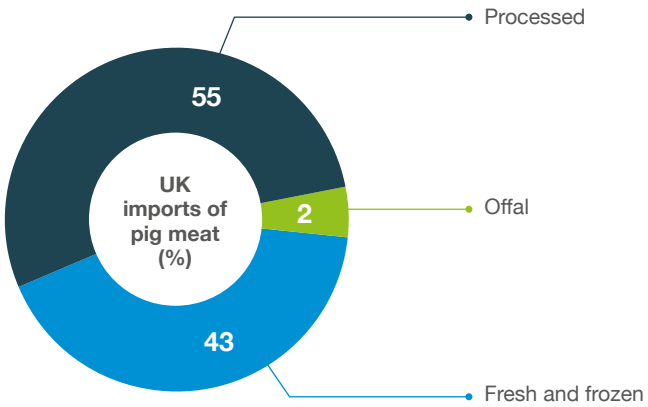
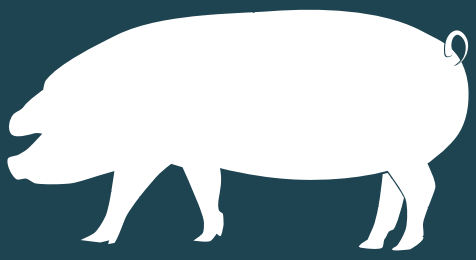


Figure 32. **UK imports of pig meat by industry (2013–2017 average)**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

TOP 5 ORIGINS OF UK PORK IMPORTS (2017)



Denmark 25%
Germany 20%
Netherlands 19%
Ireland 12%
Poland 7%

Denmark is the largest supplier of pig products into the UK. The country accounts for an average of 26% of total imports every year (2013–2017). Most pork imports from Denmark are fresh and frozen, accounting for around half of the total imports from the country. Processed products contribute to the rest of the share, with bacon accounting for 40% of Danish pork exports into the UK.

Although volumes have remained relatively steady, at around 242,000 tonnes per year, the Danish share of UK pork imports has declined from 42% in 1997 to 25% in 2017. This decline is due to other nations' increasing export capabilities. Imports from Germany, Ireland and Poland have all grown significantly over the past two decades.

Overall, the Netherlands is the third largest source of UK pig meat imports and is the largest supplier of bacon into the UK market, accounting for an average of 38% of all bacon imports (2013–2017).

What does the domestic supply and demand situation look like?

Over the past five years, UK production of pig meat has increased (Figure 33). This is due to both an increase in the number of pigs slaughtered, as well as increasing average carcase weights. In 2017, production stood at 902,000 tonnes, 8% (70,000 tonnes) higher than in 2013.

The UK is over 50% self-sufficient in pork. Issues regarding carcase balancing mean that the UK is limited somewhat in increasing pig production to meet consumption levels. Since the demand from UK consumers is only for some parts of the carcase, e.g. loin, fillet and legs, markets would have to be found for lower-value cuts which are not in demand domestically, e.g. livers, belly, head and trotters. Therefore, the UK is likely to remain a net importer of pork and processed products.

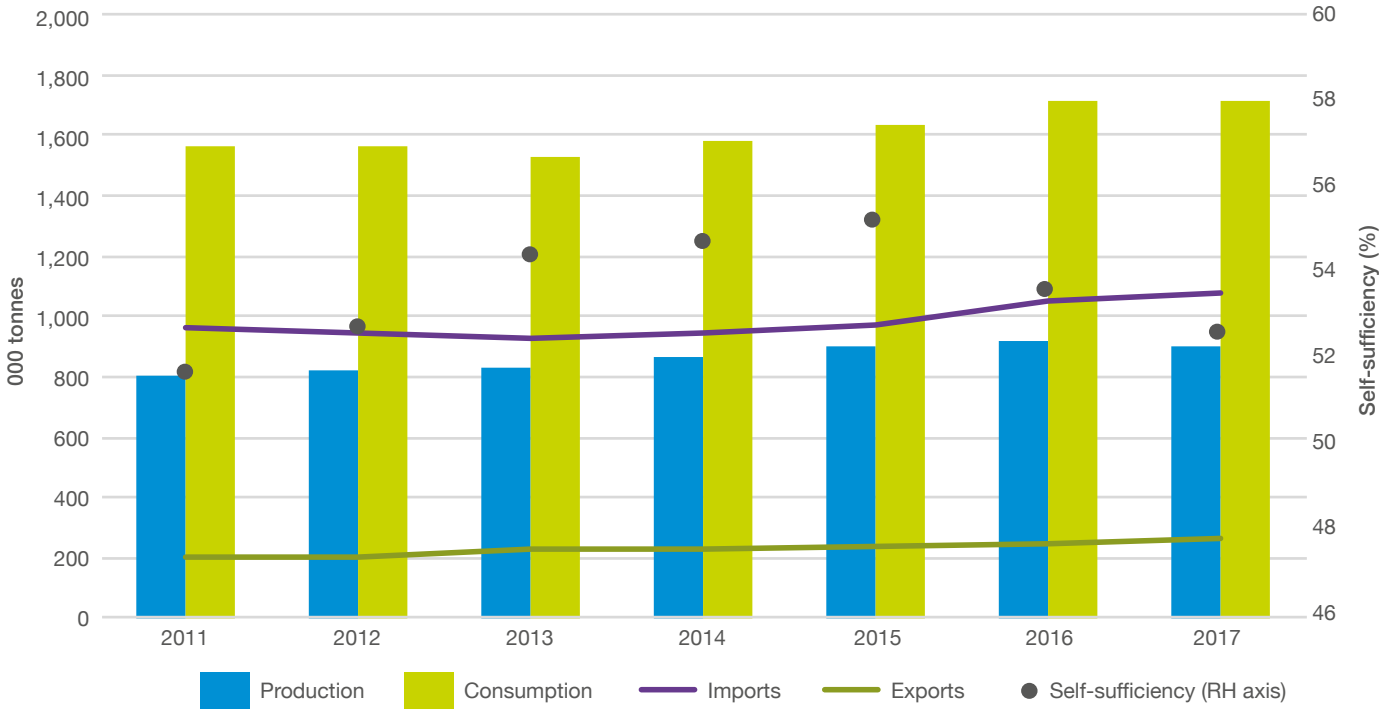


Figure 33. **UK pork supply and demand**

NB: Data is carcase weight equivalent. Source: Defra, IHS Maritime & Trade – Global Trade Atlas®/HMRC, AHDB

Note: In 2016, official import figures show a notable year-on-year increase in UK pig meat imports. This was contrary to industry intelligence, market signals and partner country trade data at that time. Pork export figures from partner trading countries have traditionally appeared higher than the level of imports recorded by HMRC. These series followed the same trend, until mid-2016 when these series converged.

How do the UK's costs of production compare with its competitors?

Globally, Great Britain (GB) has some of the highest pig production costs of any country, including some major players which export pig meat into the EU (Figure 34). Production costs are 40% higher on average than the USA, historically the second largest exporter of pig meat, with the lowest cost of production of the selected countries. GB's average cost of production is also above Germany's, the largest exporter of pig meat globally.

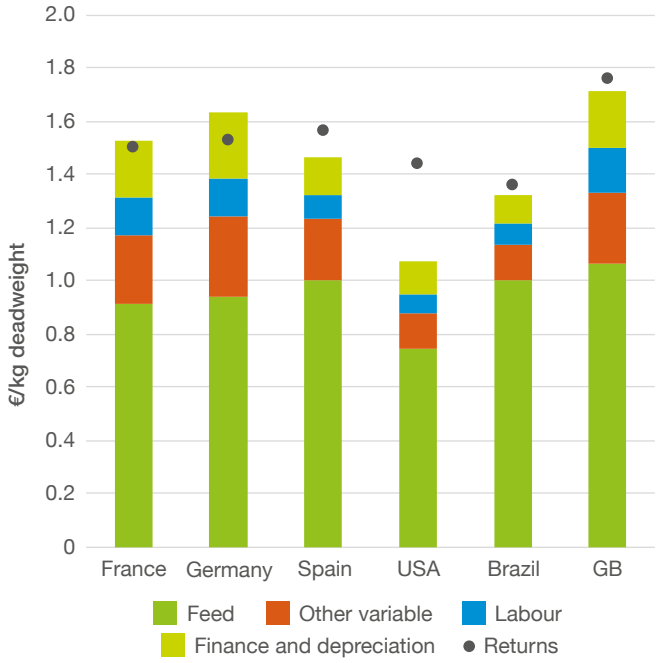


Figure 34. **Pig meat average cost of production (2013–2017)**

Source: InterPIG

One of the reasons why the GB cost of production is higher than other nations is due to the structure of the British pork industry. Up to the 40% of the GB sow herd is kept outdoors – a system which can increase the overall cost of production.

On average, the outdoor system is less productive than the indoor system in terms of pigs weaned per sow per year. For example, in 2017, the average number of pigs weaned per sow in an indoor system was 26.66, compared with 23.64 in an outdoor system.

When comparing the relative productivity of GB to some of the top pig-producing countries, the number of pigs weaned per sow per year in GB is less (25.75 in 2017) than the EU average (27.79 in 2017), as well as some of the top global players, namely Brazil and the USA.

Full details can be found in AHDB's publication, **2017 pig cost of production in selected countries**.

The difference between the cost of production and returns for GB is narrow. Therefore, in the event of tariffs being placed on exports in a 'no deal' scenario, GB pig producers could see an erosion of profit margins in order to be competitively priced on the European export market.

On the other hand, as the UK is a net importer of pork and processed products, if the UK decided to impose tariffs on imports from the EU, this would likely benefit domestic producer margins.

How could tariffs affect trade?

The trade of pork between the UK and EU member states is largely unrestricted under the single market. However, it is a different story for pork entering from outside of the EU.

Imports of pork and processed pork products from third countries are subject to sizeable tariffs. Some major exporter nations outside of the EU have considerably lower average costs of production, but the high tariffs effectively mean that the imported pork is uncompetitive. Nevertheless, there are TRQs available which allow imports into the EU at reduced or zero tariffs. When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). As it stands, the EU will have access to the largest proportion of all pork TRQs, except for boneless loins and hams and sausages. Although the UK will be entitled to 94.5% of the 3,002 tonnes *erga omnes* TRQ for sausages, this represents only a small proportion of the volume of UK sausage imports[3]. If the UK decides to impose tariffs on imports after Brexit, then most sausages would have to be imported under full tariff rates.

If the UK was to leave the EU without a trade deal, the UK could be subject to these same tariffs, making UK exports uncompetitive on the European market at least until a deal is struck. As a result, domestic prices would have to fall in an attempt to be competitive. As over half of UK pig meat exports are shipped to the EU, this would have a significant impact on the UK pork industry.

Please note that at the time of writing, details of the tariff rates the UK may set for pig meat under a 'no deal' Brexit have not been published.

[3] Please note that these percentage splits could change in the future as negotiations are ongoing.

Table 4 demonstrates the effect that tariffs could have if the UK adopted similar tariff levels to those currently set by the EU. For example, one of the UK's most significant exported pork products, fresh/chilled boneless pork, could be subject to a tariff of €869 per tonne tariff.

The extent to which these tariffs can impact prices is influenced by a number of factors, including unit price and exchange rates. For example, in 2015, the tariff on fresh boneless pork was 43% ad valorem, whereas in 2017 the tariff was 36% ad valorem, due to a higher price per unit as well as a weaker sterling–euro exchange rate relative to 2015.

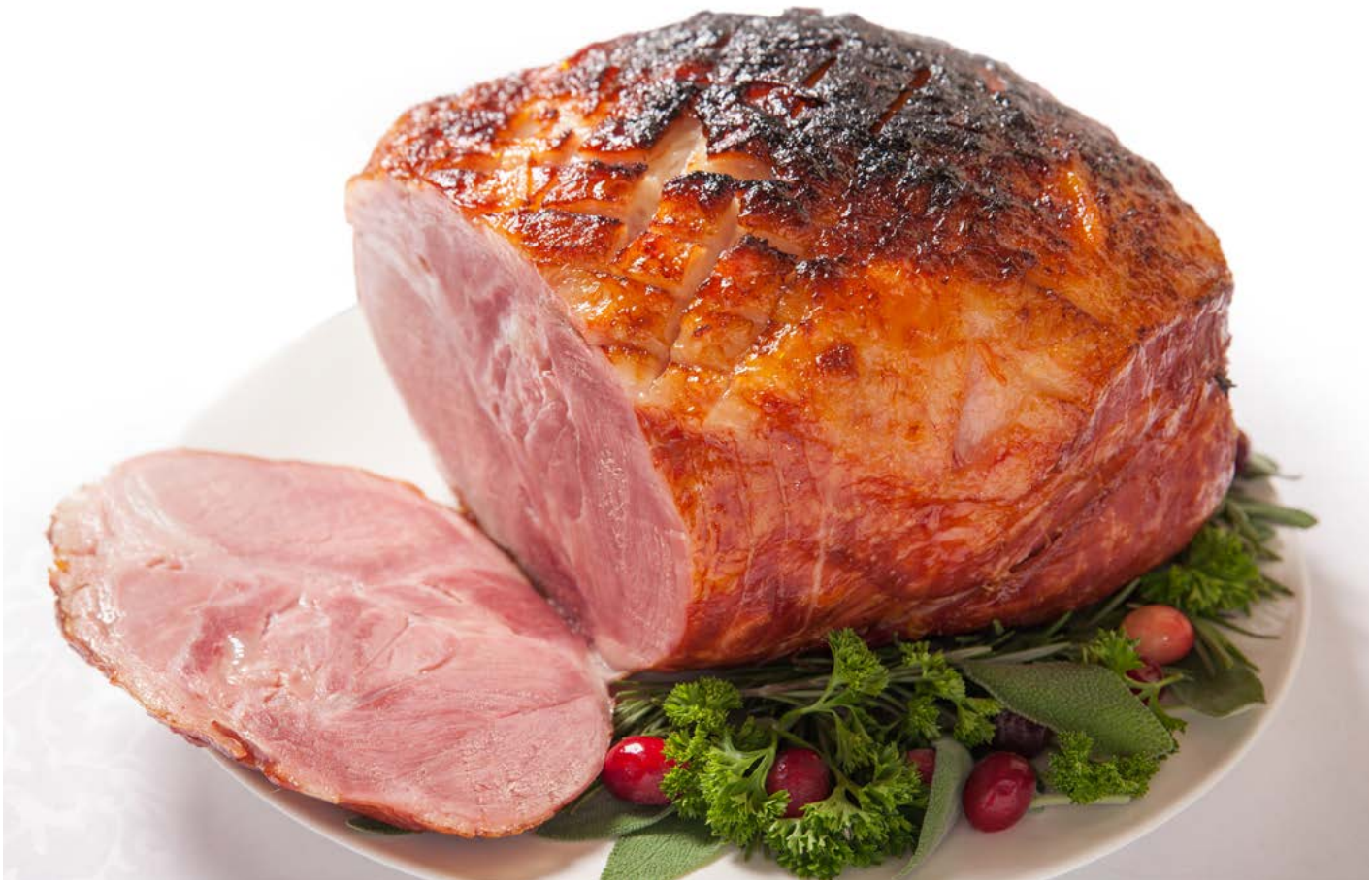
Without a deal that ensures free trade, exports of sow carcases would be a particular area of concern. With little domestic value, most sow carcases are exported to Germany. However, under a 'no deal' scenario, carcases could be subject to a tariff of €536 per tonne, which again could erode producer margins. In this instance, exports of the sow carcases would be uneconomical, and with no demand or value domestically, it may be challenging to find an outlet.

The UK could decide against imposing tariffs on pig meat imports from the EU, but this would mean removing tariffs on imports from non-EU countries as well. As a result, the increased competition for domestic producers could exert downward pressure on UK prices.

If the UK applies reciprocal tariffs on pig meat imports from the EU, then domestic prices are likely to rise, given that the UK is a net importer of pig meat. However, higher prices may be unacceptable to consumers.

Table 4. **Selection of significant pork commodities exported by the UK (2017) with effective ad valorem rates (2015 and 2017)**

Code	Product	Tariff rate	Effective ad valorem (2015 export unit price)	Effective ad valorem (2017 export unit price)
02032959	Frozen meat of domestic swine, with bone in (excl. carcases and half-carcases, hams, shoulders and cuts thereof, and fore-ends, loins, bellies and cuts thereof)	€86.9/100 kg	72%	73%
02031955	Fresh/chilled boneless pork	€86.9/100 kg	43%	36%
02032915	Frozen bone-in bellies and cuts	€46.7/100 kg	32%	21%
02031110	Fresh/chilled carcases and half-carcases	€53.6/100 kg	50%	42%



POULTRY MEAT

Gary Ford
Chief Poultry Advisor, NFU

One of the immediate threats for the UK poultry industry is access to labour. Around 60% of the total workforce in the poultry sector consists of non-UK labour and so it is important for the industry to retain access to migrant labour. A positive for the UK poultry sector is that the removal of basic payments will not affect the domestic industry, which is growing.

In terms of trade, the UK's position as a net importer of poultry meat means that if the UK decided to impose third-country tariffs on imports from the EU, domestic prices would increase, which is unlikely to be acceptable to consumers. Import substitution is not really an option given that the UK's consumption of chicken breasts would mean that it would need to more than double the size of its current flock and then have to find a home for the other parts of the bird for which there is not as much domestic demand, for example, the dark meat. The Chinese market offers some potential for chicken feet exports, but disposing of the rest of the carcase could be an issue. In short, carcase balancing regarding consumption is not achieved in the UK.

Under a 'no deal' scenario, if the UK opted to keep poultry meat imports from the EU tariff-free, then it would have to do the same for all countries, under WTO rules. As a result, the UK could see high volumes of cheaper poultry meat coming in, making it difficult for UK producers to compete in terms of price. Cheaper poultry meat imports could also compete with demand for British red meat

There is also the issue of the standard and quality of poultry meat products coming into the UK. For example, there's the possibility of imports of chlorinated and/or poultry meat produced with high antibiotic use. These would be key sticking points if the UK was to negotiate a trade deal in the future.

Delays which may occur at borders as a result of a 'no deal' Brexit could also lead to food wastage, as well as increased costs, as fresh poultry meat only has a seven-day shelf life.

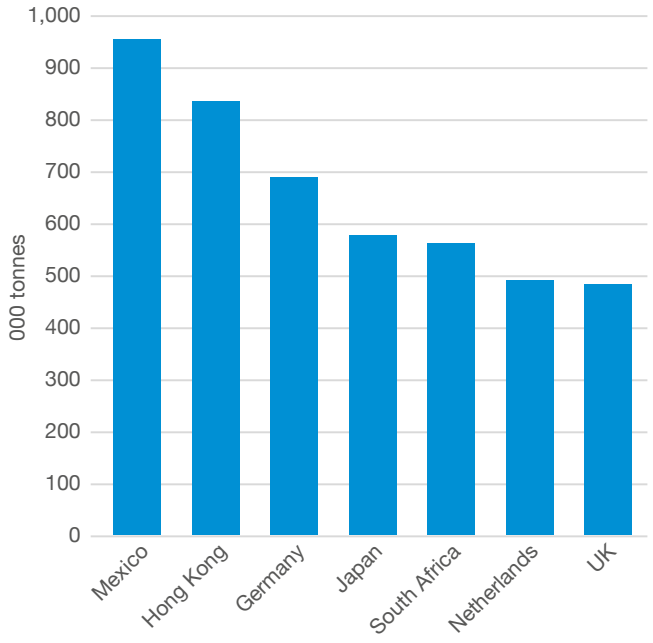


Figure 35. **Leading global poultry meat* importers, 2017**

*Includes offal
Source: IHS Maritime & Trade – Global Trade Atlas®/Local customs data

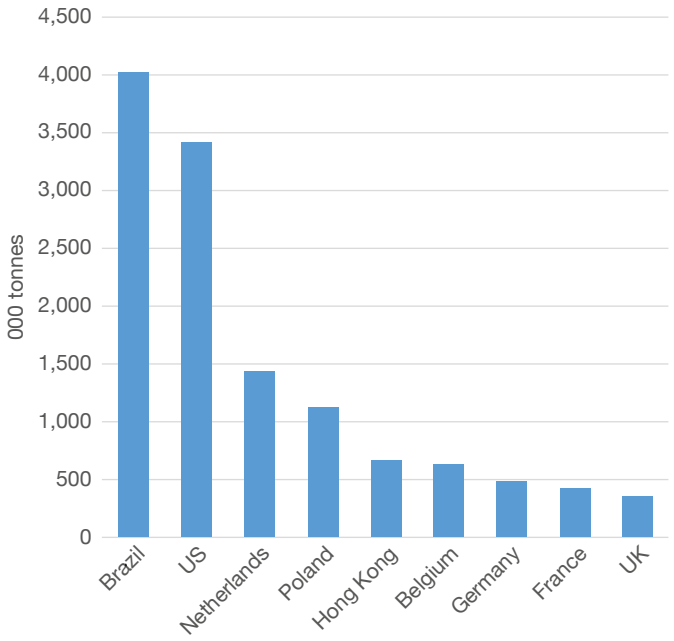


Figure 36. **Leading global poultry meat* exporters, 2017**

*Includes offal
Source: IHS Maritime & Trade – Global Trade Atlas®/Local customs data

What's the current trade situation?

Although AHDB does not cover the poultry meat sector, it is examined in this report as post-Brexit trade developments in poultry could indirectly affect the red meat and cereals sectors.

Between 2013 and 2017, the UK imported an average of 419,000 tonnes of poultry meat and offal. The EU was the main origin, accounting for 95% of all imports (Figure 37).

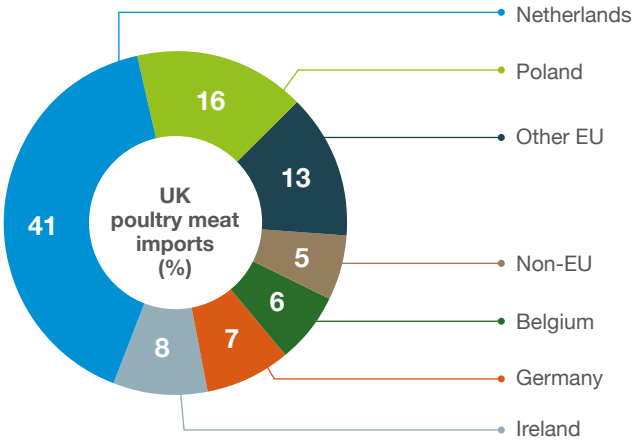


Figure 37. **UK poultry meat imports by origin, 2013–2017 (average)**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

UK exports of poultry meat (including offal) were an average of 327,000 tonnes over the same time period, meaning that the UK is a net importer of poultry meat. As with imports, the EU is the UK's major trading partner (Figure 38), accounting for an average of 73% of all UK poultry meat exports (2013–2017). The main non-EU destination for UK poultry meat is Hong Kong.

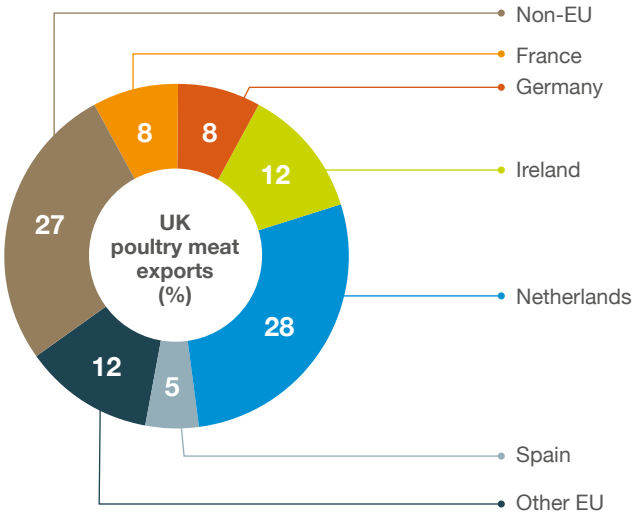


Figure 38. **UK poultry meat exports by destination (2013–2017 average)**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

The UK is even more reliant on processed poultry meat imports. Between 2013 and 2017, an average of 328,000 tonnes of processed poultry meat was imported, while an average of just 44,000 tonnes was exported. More than half of processed poultry meat imports were sourced from non-EU origins, particularly Thailand and Brazil.

What does the domestic supply and demand situation look like?

In terms of domestic supply and demand, UK poultry meat production reached record levels in 2017 (Figure 39), with growth being driven by broiler meat production. UK commercial broiler chick placings increased from 943 million in 2013 to a record 1,048 million in 2017. Subsequently, demand for cereals for feed has also seen a boost, particularly wheat.

Poultry meat is the most widely consumed meat in the UK, with per capita consumption in 2017 at 36.3 kg/person/year (**AHDB poultry pocketbook**), compared with 25.9 kg/person/year for pork and 18.2 kg/person/year for beef and veal (Figure 40). Furthermore, poultry meat consumption per capita in the UK has shown the most growth compared with other meats. Between 2007 and 2017, UK poultry meat consumption per capita increased by 2% per annum (Compound Annual Growth Rate), compared with just 0.2% for pork, while a decline of 1.4% was seen for beef and veal.

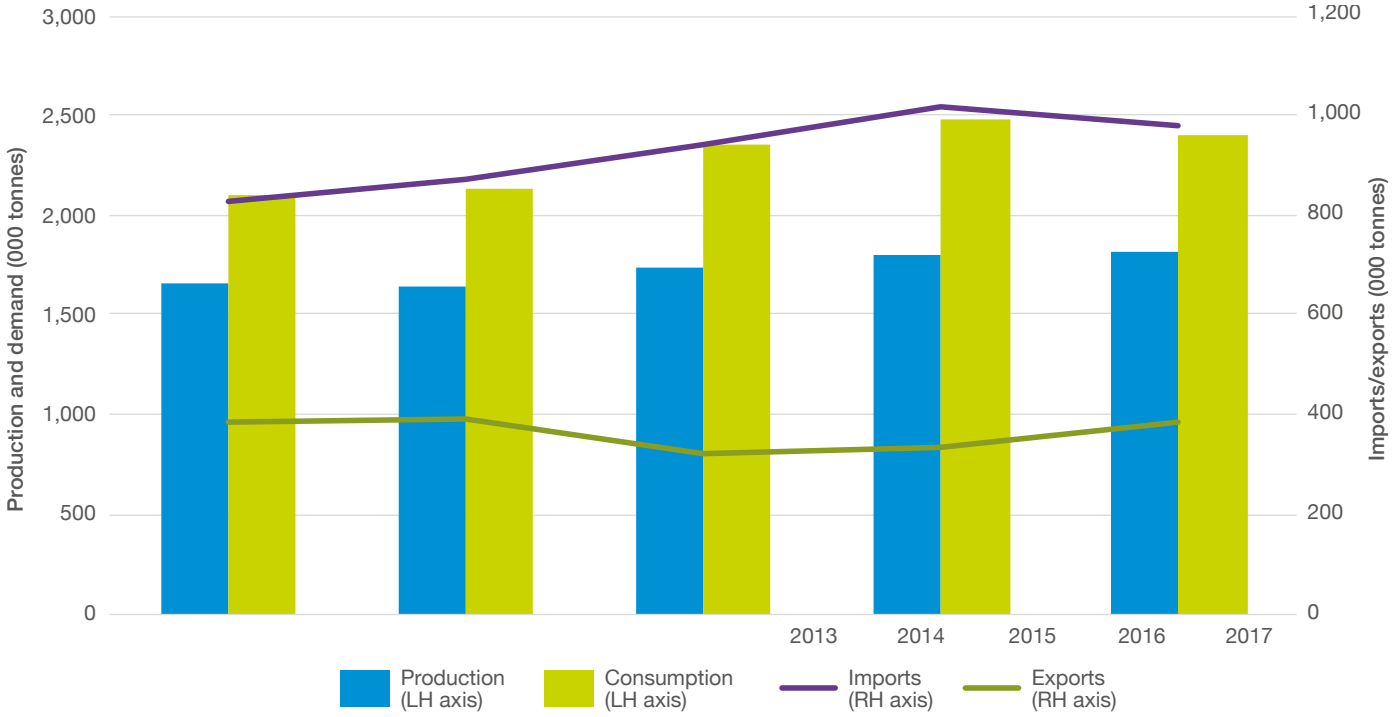


Figure 39. **UK poultry meat* supply and demand**

Source: IHS Maritime & Trade – Global Trade Atlas®/HMRC

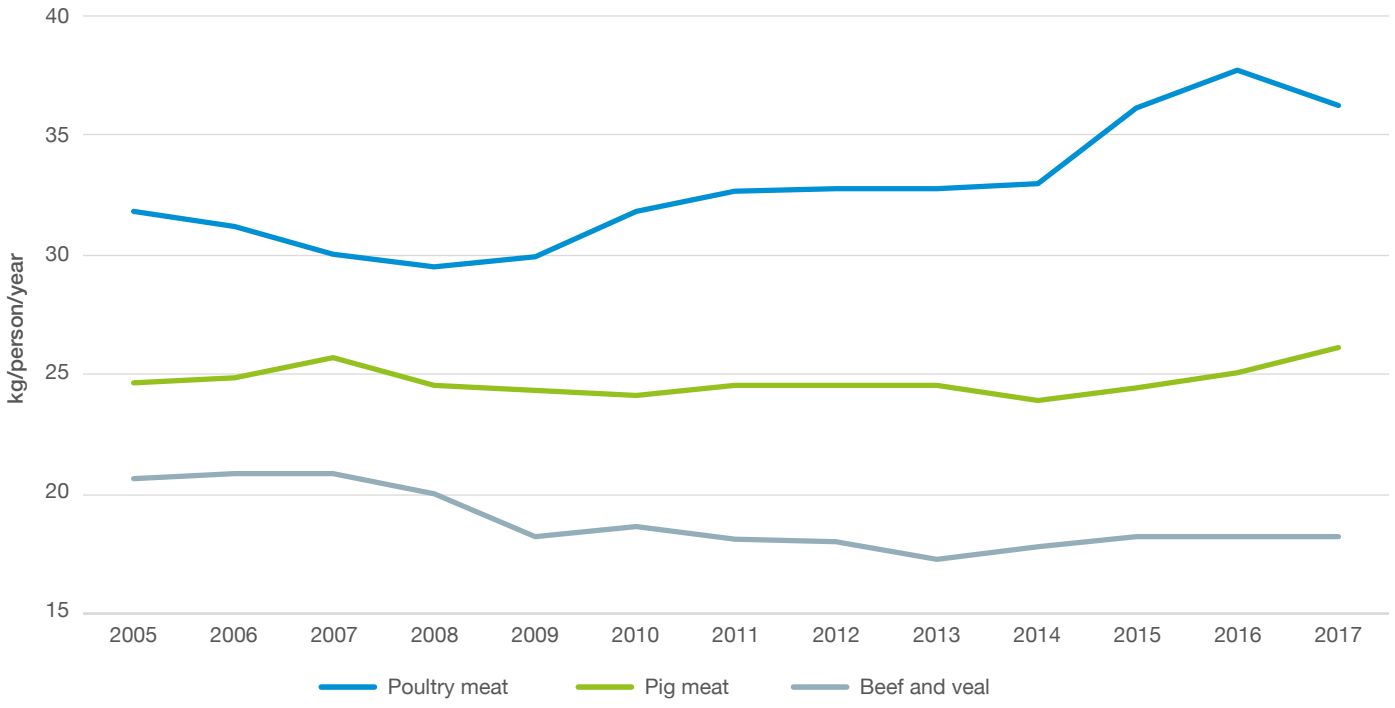


Figure 40. **UK per capita consumption of major meats**

Source: AHDB; calculations based on data from Defra, HMRC and the ONS

The boost in domestic production has helped improve the UK's self-sufficiency in poultry meat recently, although it is not at levels seen in 2013, likely due to increased domestic consumption (Figure 41). As a result, imports are likely to remain important to satisfy domestic demand.

Chicken breasts are the main poultry meat product imported by the UK. It is estimated that, based on current import levels of chicken breasts, UK poultry farmers would need to produce an additional 1.1 billion birds (an increase of 124%) in order to satisfy UK demand. Furthermore, there is the issue of carcase balance, which means that markets would need to be found for the remainder of the meat. This highlights why imports are likely to remain important.

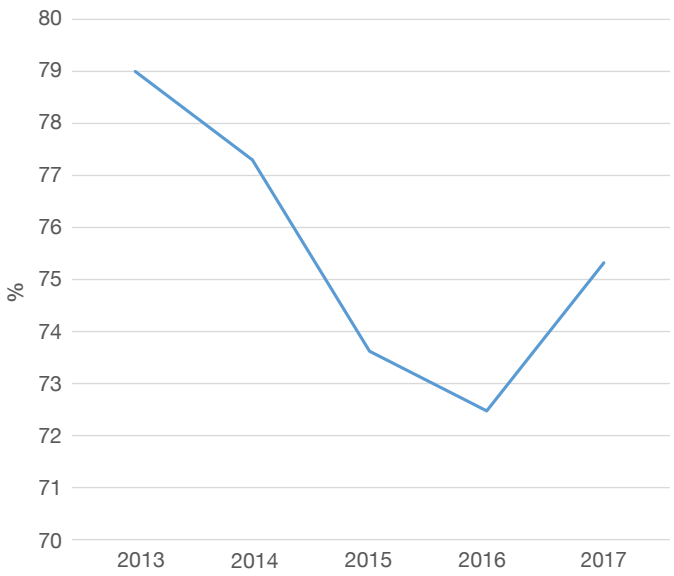


Figure 41. **UK poultry meat self-sufficiency ratio**

Source: Defra, HMRC, AHDB and ONS

How could tariffs affect trade?

EU WTO tariffs (third country) on poultry meat range from €187/t to €1,283/t. So, in the event of tariffs in a 'no deal' scenario, it is likely that the UK could incur additional costs for exporting to the EU market. If the UK decides to impose tariffs on imports from the EU, this would undoubtedly raise prices for consumers by a considerable amount. Free trade deals with other countries such as Brazil and the USA could be an option, but non-tariff issues are likely to be a big bone of contention, particularly animal welfare standards and chlorinated chicken. This could push further demand for red meat such as pork and beef, at the expense of poultry.

Looking at tariffs in ad valorem (or percentage) terms can provide a different perspective. For example, an import tariff of €187/t on frozen chicken backs, necks, rumps and wing tips equates to around 33% (based on 2017 unit price and the average annual exchange rate). A tariff of €1,283/t on fresh/chilled boneless cuts of domestic ducks is around 15% of the 2017 unit price.

The UK imports mainly fresh chicken breasts, which have a tariff of €602/t or 19% ad valorem of the 2017 unit price.

The ad valorem tariff depends on the unit price of the commodity as well as the exchange rate in a given year. In 2015, the tariff for fresh chicken legs was 29% in ad valorem terms, but in 2017 was 37%. A lower price, combined with a weaker pound against the euro, were the main factors behind the change. The ad valorem tariff for fresh boneless cuts of duck meat was lower in 2017 compared with 2015 due to a large increase in the unit price.

Table 5. **Selection of poultry meat products with effective ad valorem rates (2015 and 2017)**

Code	Description	Tariff (€/t)	Effective ad valorem (2015 export unit price)	Effective ad valorem (2017 export unit price)
02071350	Fresh/chilled chicken breasts and cuts thereof	602	16%	19%
02071360	Fresh/chilled chicken legs and cuts thereof	463	29%	37%
02071440	Frozen backs/necks/rumps wing tips	187	22%	33%
02074410	Fresh/chilled boneless cuts of ducks	1,283	20%	15%

Tariffs on processed poultry meat are even higher, ranging from €1,024/t to €2,765/t.

It is unlikely that the UK would impose import tariffs on poultry due to its reliance on imports, but this would mean having to remove imports for all countries, under WTO rules.

The use of TRQs would allow poultry imports into the UK at lower tariff rates. When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). The division of all poultry meat TRQs is in favour of the EU, mostly ranging from 85% to 100%, with the exception of chicken carcases, where the split is 65% in favour of the EU. For processed poultry meat products, there is generally a more even split of TRQs between the UK and EU. As negotiations with third countries affected are still ongoing, these TRQ allocations may change in the future.

CEREALS & OILSEEDS

Helen Plant and James Webster
Senior Analysts
AHDB Market Intelligence

The Tunisian export market probably presents the best opportunities for hard and soft milling wheat, as it is a destination the UK has been able to supply in 'typical' production years. Similarly, Tunisia, alongside Algeria and Saudi Arabia, represents good prospects for UK feed barley exports. However, increasing competition from low-cost producers, such as Russia, and low moisture requirements are a threat. Competing in the commodity market is becoming more and more challenging and the potential of tariffs on exports to the EU is likely to make things more difficult. However, this is only really relevant when the UK has an exportable surplus of wheat – in the last few seasons, it hasn't. Looking forward, the UK needs to be increasingly focused on added-value or niche products such as Group 3/soft milling wheat, rather than commodity exports.

Regardless of tariffs, UK flour trade could see considerable disruption, especially regarding exports to the Republic of Ireland. Even if there is a Free Trade Agreement (FTA) in place between the UK and EU, Rules of Origin criteria would apply, which means that a certain proportion of the flour must be made from UK inputs. Given that the UK usually imports a proportion of its milling wheat supplies from North America, as well as France and Germany, it would be difficult to differentiate flour produced from UK wheat and it is likely that the proportion of imported wheat used to produce the flour would be higher than the Rules of Origin limit. As a result, the UK could see higher domestic supplies of flour, putting pressure on prices.

Any situation that opens up access to the UK market would mean increased competition for domestic products. The UK has already seen wheat face competition from maize imports in recent years in both the animal feed and distilling sectors.

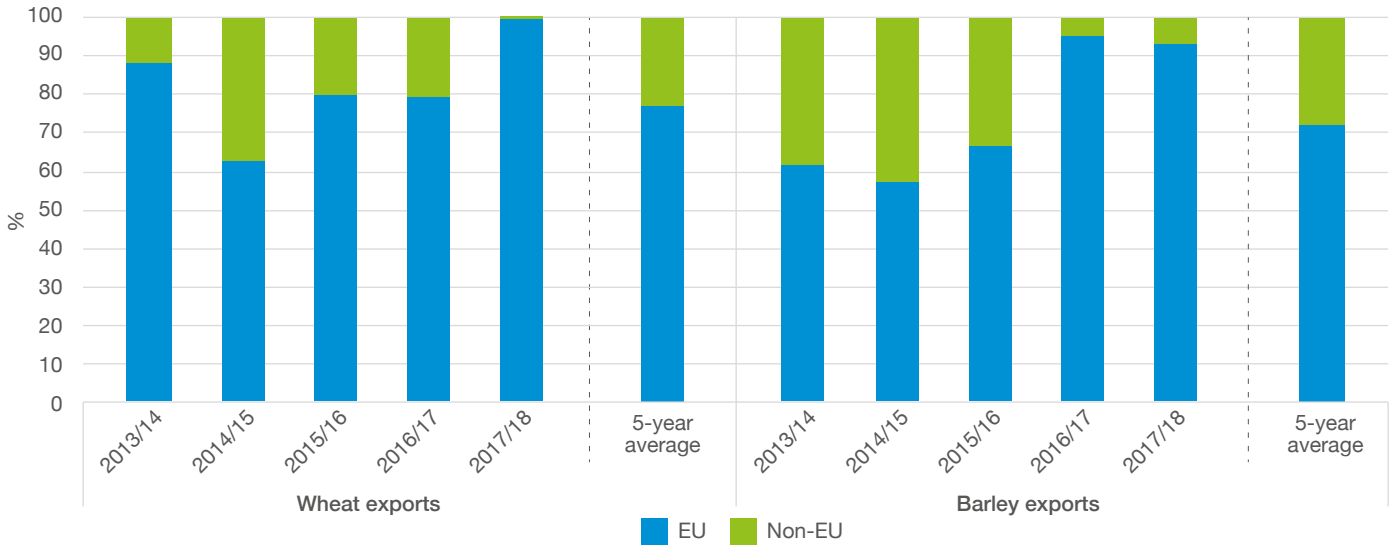


Figure 42. **UK cereals exports**

Source: HMRC

Over 60% of cereals grown in the UK are used to produce animal feed, so the size of livestock production is important for the grain markets in general. Although the animal feed and premium markets are different, for many growers the animal feed market acts as a financial safety net if their products don't reach the specifications required for the premium markets. UK production could look very different if animal feed demand declined dramatically and the UK became primarily a premium grain producing industry.

UK barley exports to the EU could be hit considerably if the EU applies import tariffs of €93/t on the product. Although there may be some scope to use existing TRQs, this would still involve a tariff of €8–16/t. This is likely to lead to an oversupply on the domestic market, if current production trends remain in place, and put downward pressure on prices. There is an opportunity to make the most of the UK barley brand in markets further afield – particularly malt in artisan brewing markets like the USA.

If imports in to the UK face tariff barriers, it is reasonable to expect some import displacement in products like rapeseed oil. Import substitution of six-row barley is also an option, but suitable varieties need to be approved first and so this isn't really viable in the short term. More widely, tariff barriers on agricultural imports from Europe would be largely positive for UK agriculture, yet few commentators view them as being a realistic or long-lasting option.

A more detailed discussion of the opportunities and threats facing UK cereals is found in other Horizon reports, such as **Post-Brexit prospects for UK grains** and **Brexit scenarios: Impacts on the UK's milling and malting sectors**.

What's the current trade situation for cereals?

In the past five crop years, UK wheat exports have ranged between 430 kt (2013/14) and 2.83 Mt (2015/16), with the 2017/18 total at around 445 kt. On average, in the period 2013/14–2017/18, 77% of UK wheat exports were sent to the EU (Figure 42). However, in the 2017/18 crop year, virtually all UK wheat exports were shipped to the EU.

The UK has consistently shipped wheat to the non-EU markets of Algeria and Morocco in four of the past five seasons. However, in 2017/18, there were no shipments of wheat to these countries. In absolute terms, 2017/18 UK wheat exports were the lowest since 2013/14, mainly due to tight domestic supplies.

UK barley exports to the EU from 2013/14–2017/18 averaged 72% (Figure 42), with Algeria, Saudi Arabia and Tunisia key non-EU destinations. However, similar to wheat exports, the proportion of exports sent to non-EU destinations has declined in the past few seasons.

UK wheat imports have averaged around 1.73 Mt in the past five seasons, with 70% of these imports originating from the EU (Figure 43). However, the share of non-EU imports has grown in recent years, reaching 34% in 2017/18, compared with 21% in 2013/14. Virtually all UK barley imports are sourced from the EU.

The UK is, typically, a net importer of milling wheat, while any surplus in feed wheat is exported. The UK's exportable surplus of barley is of feed quality. High-quality malting barley is not in surplus and would most probably only be exported when it had a higher value overseas than in the UK market.

UK feed wheat faces competition from maize imports, mainly for animal feed demand. Over the past five seasons, the UK has typically imported around 2 Mt of maize per annum, with almost 60% of this sourced from the EU on average (2013–2017).

UK flour is traded almost entirely within the EU, with exports to the Republic of Ireland particularly important. The UK is a net exporter of malt, most of which is shipped to non-EU destinations. The UK trade situation for flour and malt is discussed in more detail in the report **Brexit scenarios: Impacts on the UK's milling and malting sectors**.

What does the domestic supply and demand balance look like?

Tighter domestic supplies of wheat, along with increasing global competition, have created a challenge for UK wheat exports in recent years. Since 2013/14, the UK has been a net exporter of wheat in only two seasons (2014/15 and 2015/16), as shown in Figure 44. Since 2014/15, the UK wheat area has declined per season, although the relatively higher prices this season could incentivise a higher area to be planted. The main unknown for UK wheat consumption is usually whether or not the two UK biofuel companies, which use feed wheat as raw material, will be in operation

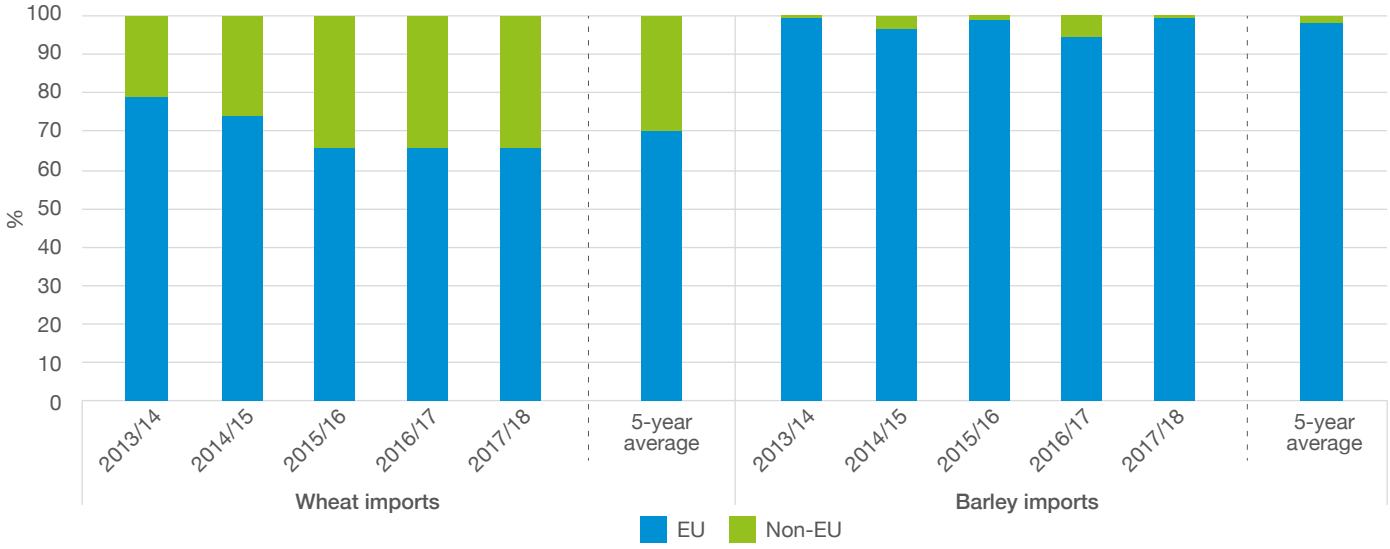


Figure 43. **UK cereals imports**

Source: HMRC

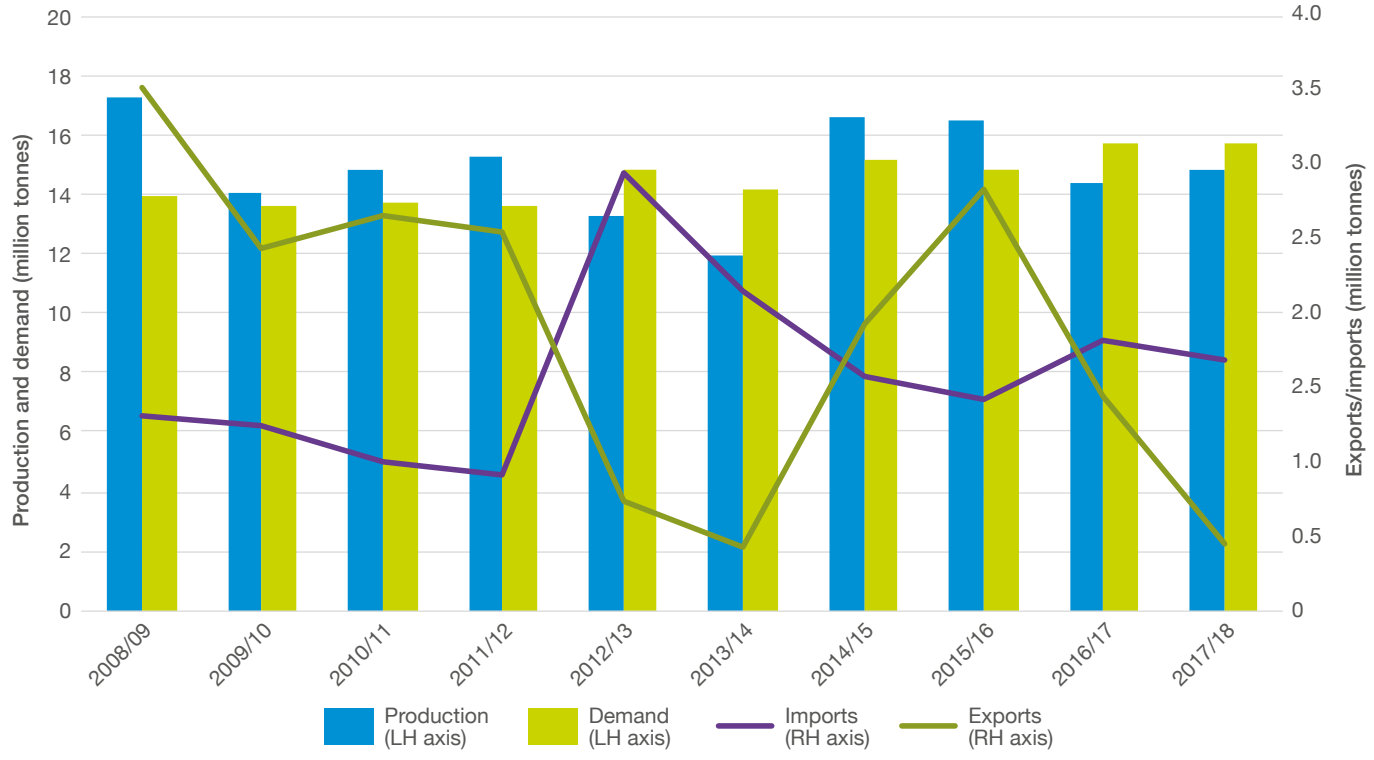


Figure 44. **UK wheat supply and demand**

Source: HMRC, Defra, AHDB

and how long for in a given year. Recently, one of these companies, Vivergo Fuels, announced its decision to close and so is likely to reduce wheat demand in the North East compared with recent years. However, looking at the bigger picture, the impact of lower wheat demand for bioethanol production will be reduced for overall UK wheat consumption in 2018/19. This is due to much higher demand for wheat in animal feed production as forage availability is lower following drought conditions over the summer. Furthermore, continuing growth in the poultry sector has also led to higher demand for wheat in feed.

The trade situation for UK barley is more clear-cut than for wheat, as the UK has consistently been a net exporter of the commodity (Figure 45). The agronomic challenges presented by black-grass have contributed to an increase in the spring barley area and production, which has helped to maintain an exportable surplus.

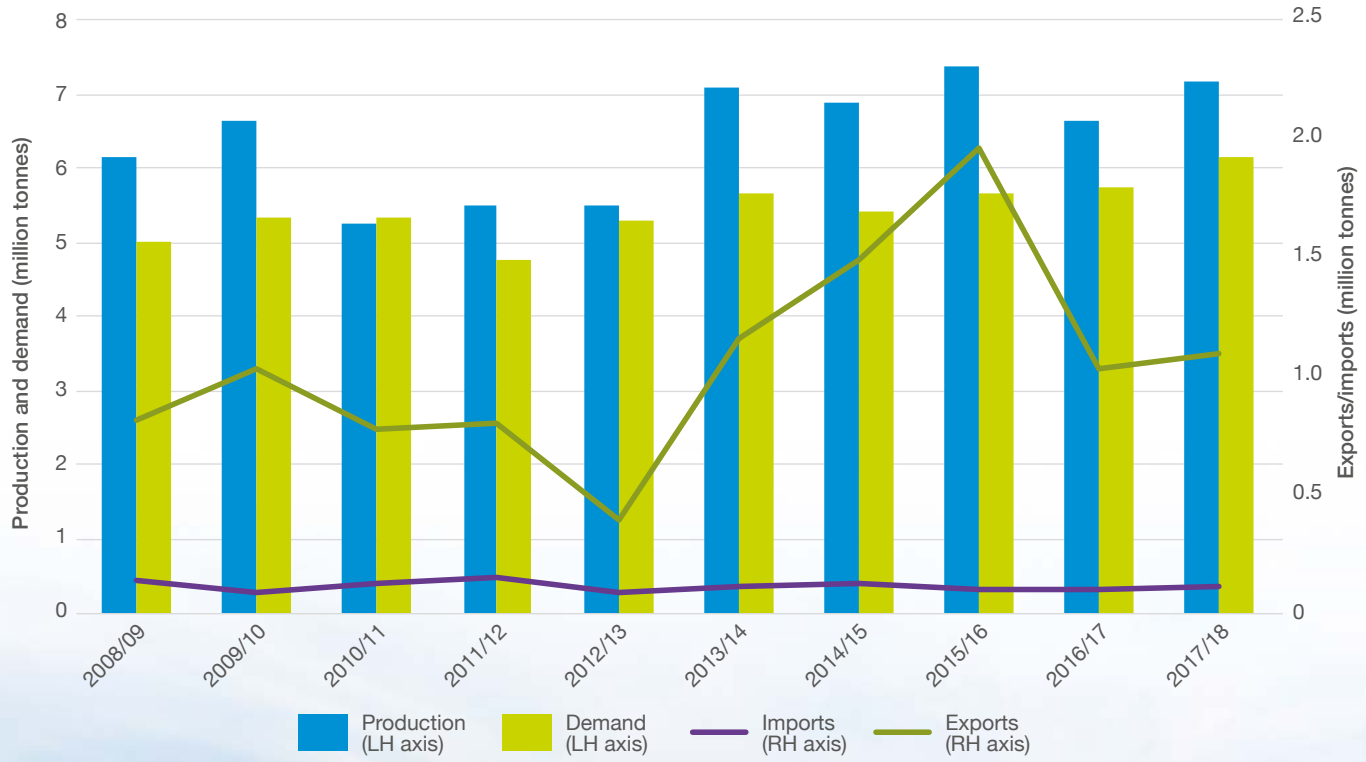


Figure 45. **UK barley supply and demand**

Source: HMRC, Defra, AHDB

What's the current trade situation for oilseeds and oilseed products?

In the past five seasons, on average, 93% of UK rapeseed exports were destined for the EU, mainly for use in biodiesel production. Imports are mainly from the EU as well, although in some seasons, such as 2016/17, imports from Australia were more than total imports from the EU due to Australian prices being more competitive than European prices. Although the UK has been a net exporter of rapeseed for most of this decade, in the past two seasons it has been a net importer. In 2016/17, this was due to UK rapeseed production falling to the lowest level (1.78 Mt) since 2004/05. In 2017/18, production levels rebounded to above 2 Mt, due to near-record yields. However, imports were maintained at relatively high levels as it had been expected that production would be held back by the lowest area sown since 2004.

The UK has imported an average of 2 Mt of soya cake (commonly referred to as soya meal) in the past five seasons, primarily for use as protein animal feed. Typically, 73% of UK soya cake imports are from non-EU origins.

The UK is usually a net exporter of rapeseed oil (net exports in the past five seasons have averaged 81 kt, with 85% shipped to the EU). Vegetable oils are largely substitutable for one another. Between 2013/14 and 2017/18, 298 kt of sunflower oil was imported into the UK on average, with 74% of this sourced from the EU. Over the same time period, an average of 406 kt of palm oil was imported, with 423 kt imported in 2017/18. The majority (79% on average) of palm oil imports were sourced from non-EU countries, predominantly Indonesia and Malaysia.

How self-sufficient is the UK in cereals and oilseeds?

The UK is self-sufficient in barley and, on the whole, largely for rapeseed, although the ratio for rapeseed has dropped in recent years (Figure 46). UK self-sufficiency in wheat has also declined recently, a result of lower domestic supplies.

It is also worth noting that the UK is dependent on milling wheat imports with higher protein contents than those usually found domestically. North America and Germany are key import destinations for these.

Self-sufficiency in rapeseed has declined in recent years due to a general decline in the area, which is likely to be a result of increased technical challenges in growing the crop, such as pressure from cabbage stem flea beetle, as well as restrictions of neonicotinoid use. Low market prices have also been a factor in some seasons.

Figure 46. **Self-sufficiency ratio**

Source: HMRC, Defra

How could tariffs impact cereals and oilseeds?

Rapeseed and other oilseeds, such as soya beans, are tariff-free under the WTO Most Favoured Nation (MFN) tariffs adopted by the EU. Oilseed cakes are also tariff-free.

WTO MFN tariffs on vegetable oil imports have variable rates (generally under 10%). The tariff for importing crude rapeseed oil for use in food is 6.4%, while the tariff for refined rapeseed oil for use in food applications is 9.6%.

If export tariffs are in place on rapeseed oil after Brexit, this would lower the domestic price of rapeseed oil by the amount of the tariff. An import tariff would serve to increase the domestic price, but as the UK is typically a net exporter of the oil, the export tariff would be expected to have a larger influence. While other factors, such as currency movements, may to some extent mitigate the effect of tariffs, a lower domestic price of rapeseed oil could negatively impact UK rapeseed crush margins and so, indirectly, rapeseed prices.

The UK, however, imports other vegetable oils, which would become more expensive for processors if import tariffs were in place. Sunflower oil imports could potentially see a bigger difference in terms of importing costs. Ukraine is the world's top sunflower oil producer and the EU has an agreement with Ukraine, allowing tariff-free access for sunflower oil imports. Post-Brexit, this agreement may not extend to the UK.

Import tariffs on vegetable oils may provide opportunity for domestic rapeseed oil to displace imports. However, while most oils are substitutable, there may be some applications where switching between oils is not favourable.

Tariffs on cereals depend on the commodity, grade and origin. Existing tariff rate quotas (TRQs) could play an important role if tariffs are placed on UK exports/imports to and from the EU. For example, in-quota imports of common wheat are subject to a tariff of €12/t (*erga omnes*), whereas out-of-quota the tariff is a prohibitive €95/t. When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). Table 6 shows how the *erga omnes* TRQs for wheat and barley will be divided, although this may change in the future as negotiations with the third countries affected are still ongoing.

Table 6. **Split of non-country specific (*erga omnes*) TRQs for wheat and barley**

	Bound Tariff	Tariff Rate Quotas			Comments
		Tonnage		Tariff	
		UK	EU		
Common wheat (medium and low quality)	€95/t	0	129,577	€12/t	There are also a number of country-specific favoured tariffs, for example with Ukraine and North America.
Quality wheat	Variable tariff but rarely applied	0	300,000	n/a	The tariff applies to wheat types not generally grown in the EU. The tariff is strictly variable, but since it is applied only once the wheat price is below €155/t, it has rarely been applied.
Barley	€93/t	293	306,812	€16/t	See comments for common wheat.
Malting barley	€93/t	30,101	20,789	€8/t	

How do the UK's costs of production for cereals and oilseeds compare with its competitors?

The UK's production costs for wheat are among the highest of its key competitors and above the level of gross revenue (Figure 47). In the event of tariffs being placed on wheat exports, UK farmers are likely to see their profit margins squeezed to a greater extent than their counterparts elsewhere, if production costs remain at this level and domestic prices fall. A similar situation is seen for UK barley production costs (Figure 48). It is worth noting that while both the euro and pound depreciated against the US dollar between 2013 and 2017, the devaluation of the euro was to a lesser extent than the pound, and so shows a larger difference between the UK and other EU countries.

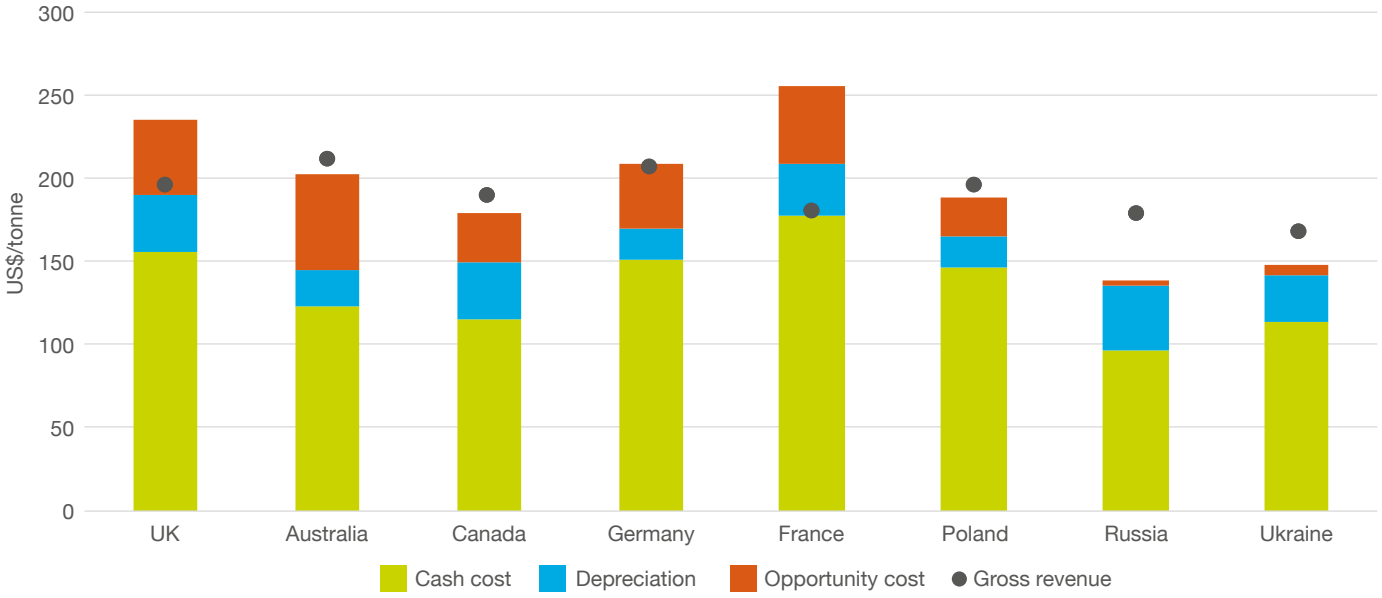


Figure 47. **Wheat average* cost of production and revenue (2013–2017)**

*Average of representative farms in a given country, not the national average
Source: agri benchmark

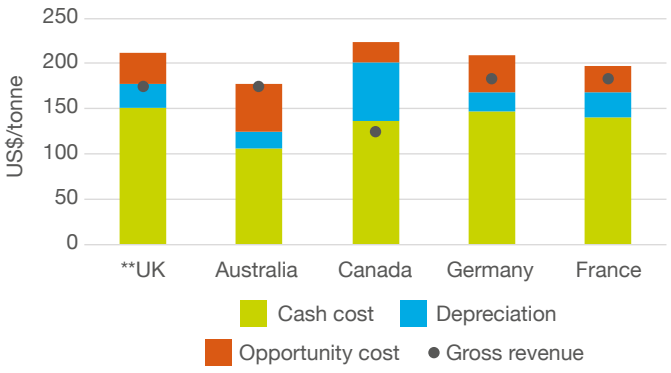


Figure 48. **Barley average* cost of production and revenue (2013–2017)**

*Average of representative farms in a given country, not the national average
Source: agri benchmark, **AHDB (Farmbench)

If the UK is a net importer of wheat and import tariffs were in place, domestic prices would be expected to increase, helping farmers' margins. In the AHDB commissioned study, **Brexit scenarios – impacts on the UK's milling and malting sectors**, it was estimated that the milling wheat import price could increase by around 15%, assuming there was no reduction in flour production.

With the exception of Canada, the UK's average cost of production for rapeseed (2013–2017) has been on par with, or lower than, some of its main competitors (Figure 49). Furthermore, the lack of tariffs on oilseeds means that UK rapeseed is in a better position than wheat or barley in terms of trade if there is no trade deal between the EU and UK. This may influence UK cropping decisions in the future. Although it is important to note that rapeseed faces a number of technical challenges, such as restrictions on neonicotinoids and pest problems. Potential tariffs on rapeseed oil could also indirectly affect rapeseed prices.

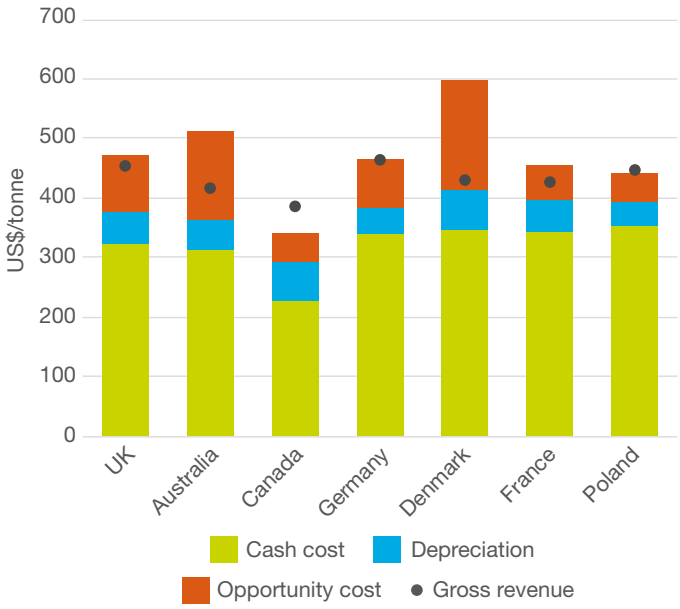


Figure 49. **Rapeseed average* cost of production and revenue (2013–2017)**

*Average of representative farms in a given country, not the national average
Source: agri benchmark

POTATOES

Rob Clayton
AHDB Strategy Sector Director

The UK recently signed a deal that would allow seed potato exports to China, which is important given that the country is the world's largest potato consumer. The Chinese market is continuing to expand and there is high demand for chips and crisps, so the UK could see a rise in exports of seed potato varieties used to make these processed products.

Continuing to showcase seed potential in Kenya remains a priority, as a positive trading relationship there would unlock a bloc agreement across all COMESA members, where a challenging climate is leading to a dependence on imports of high-quality seed each year.

Cuba offers another opportunity. The country imports around 17 kt of seed potatoes from France and the Netherlands. Due to a new export procedure drafted by Science and Advice for Scottish Agriculture, the UK can now try to capitalise on the fact that British produce is held in high regard by the Cuban government due to its health standards.

Keeping the focus on South America, there is also the prospect of higher UK seed potato exports to Brazil, following an agreement on seed potato certification standards between Brazil and Scotland.

In terms of its main existing seed potato export markets, the UK could potentially see export tariffs of 2% for Egypt and 2.5% for Morocco. While this would mean higher export costs, these could easily be negated by other factors such as currency effects.

Tariffs aside, there could be additional phytosanitary controls on fresh and seed potato trade between the UK and EU. Not only would this make it more difficult for the UK to export to the EU, but it is likely to make the certification process longer, increasing costs for businesses.

If the UK decided to apply import tariffs on frozen potato products, then it could potentially look towards import substitution. In Scotland, there is limited opportunity for farmers to grow processing varieties, but seed potato varieties for processing could be transported to England. This could allow the UK supply chain to produce domestic products at a price advantage to imported products. However, it is unlikely that the UK will have sufficient processing capacity to satisfy domestic demand. While some companies are investing in increasing their processing capabilities, the scale of this is unlikely to match the processing capacities available in Belgium, the Netherlands, France and Germany, where raw product can move freely across borders. So, in order to capitalise on this opportunity, considerable investment will be needed.

What's the current trade situation?

UK potato trade comprises various types of raw and processed products.

The UK's main activity in potato exports is for seed potatoes. Average UK seed potato exports (2013–2017) were 109 kt (Figure 50), with an average value of £47.6 million. Average imports of seed potatoes over the same timeframe were 20 kt.

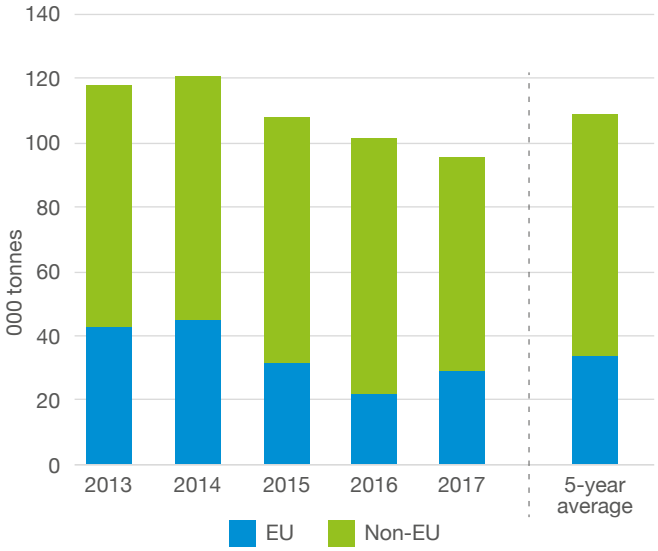


Figure 50. **UK seed potato exports**

Source: HMRC

However, since 2014, there has been a decline in seed potato exports. Likewise, imports of seed potatoes have also fallen below average in the past few years, totalling around 10–11 kt.

Seed potato exports are primarily destined for non-EU countries. Over the past five years, Egypt has accounted for almost half of all UK seed potato exports, while Morocco has accounted for an average of 9%. In recent years, the share of non-EU exports has increased.

The recent decline in seed potato exports are due to lower shipments to Egypt. There are suggestions that this may be due to some experimental seed multiplication of the variety Hermes. Additionally, Egyptian importers bought too much seed in previous years, which they have had trouble selling on the domestic market, and so this has lowered their requirements.

The Central Administration for Plant Quarantine (CAPQ) of the Egyptian Government recently published a new decree for the importation of seed potatoes into Egypt for 2015/16, indicating a reduction in the maximum permissible tuber size from 60 mm to 55 mm. This change has also impacted UK seed potato exports to Egypt.

A major programme in Egypt designed to promote domestic cultivation of seed potatoes and reduce reliance on imports was also launched in April 2018.

Processed potato products, such as crisps, are another key export area in the potato sector. Compared with seed potatoes, UK crisp exports increased between 2013 and 2017, with 2017 exports above the five-year average. The UK crisp market is saturated and so crisp manufacturers have increasingly turned their attention to overseas markets. The UK's reputation for producing quality premium products could be a likely factor behind the growth in exports between 2013 and 2017.

The EU is the main destination for UK crisp exports, accounting for an average of 87% of all exports between 2013 and 2017 (Figure 51). Ireland is the main customer of UK crisps, with shipments averaging 54% of total exports.

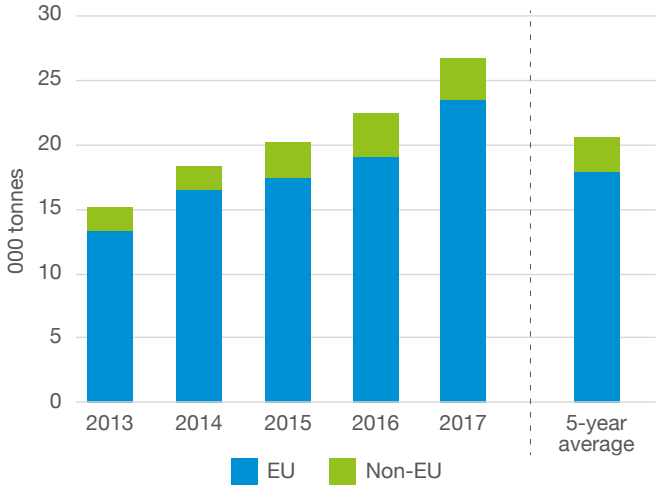


Figure 51. **UK crisp exports**

Source: HMRC

Frozen potato products are the main category of UK potato imports. Virtually all (99%) frozen potato product imports over the past five years have originated from the EU.

In 2017, there was an increase in frozen potato product imports (Figure 52). At 612 kt, these were higher than the five-year average, mainly due to higher shipments from Belgium. Frozen potato product imports were worth £436 million in 2017, up from £338 million in 2016.

The UK is typically a net importer of fresh/chilled potatoes. The EU is the main source for imports (76% average from 2013–2017), while Israel is the main non-EU source.

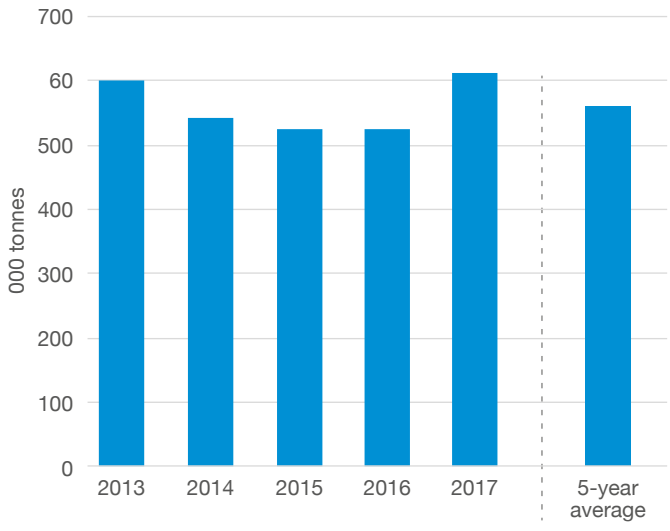


Figure 52. **UK frozen potato product imports**

Source: HMRC

Most UK fresh/chilled potato exports are sent to the EU (97% average 2013–2017). Within the EU, most exports are sent to Ireland, usually for frying. The average value of UK fresh/chilled potato exports (2013–2017) was £50.3 million.

What does the domestic supply and demand situation look like?

UK fresh potato production was between 3.0–3.4 Mt between 2013 and 2016, but in 2017, output was over 3.5 Mt (Figure 53). The pre-packed segment is the largest fresh potato category, accounting for an average of 64% of fresh potato production between 2013 and 2017. Despite the relatively lower production volumes, the UK is self-sufficient in seed potatoes and therefore exports are important in order to avoid a large surplus (Figure 54). The UK is a net importer of total processed potato products.

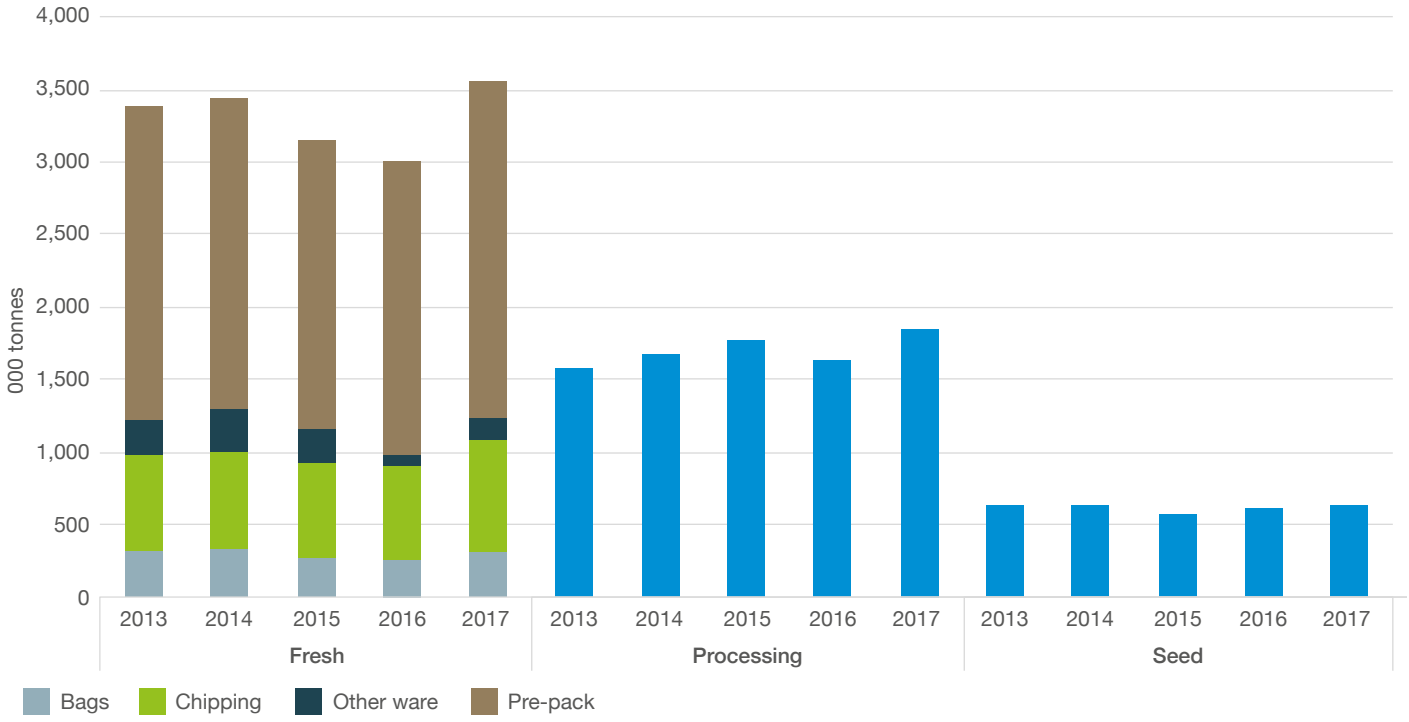


Figure 53. **UK potato production by type**

Source: AHDB Grower Panel Survey

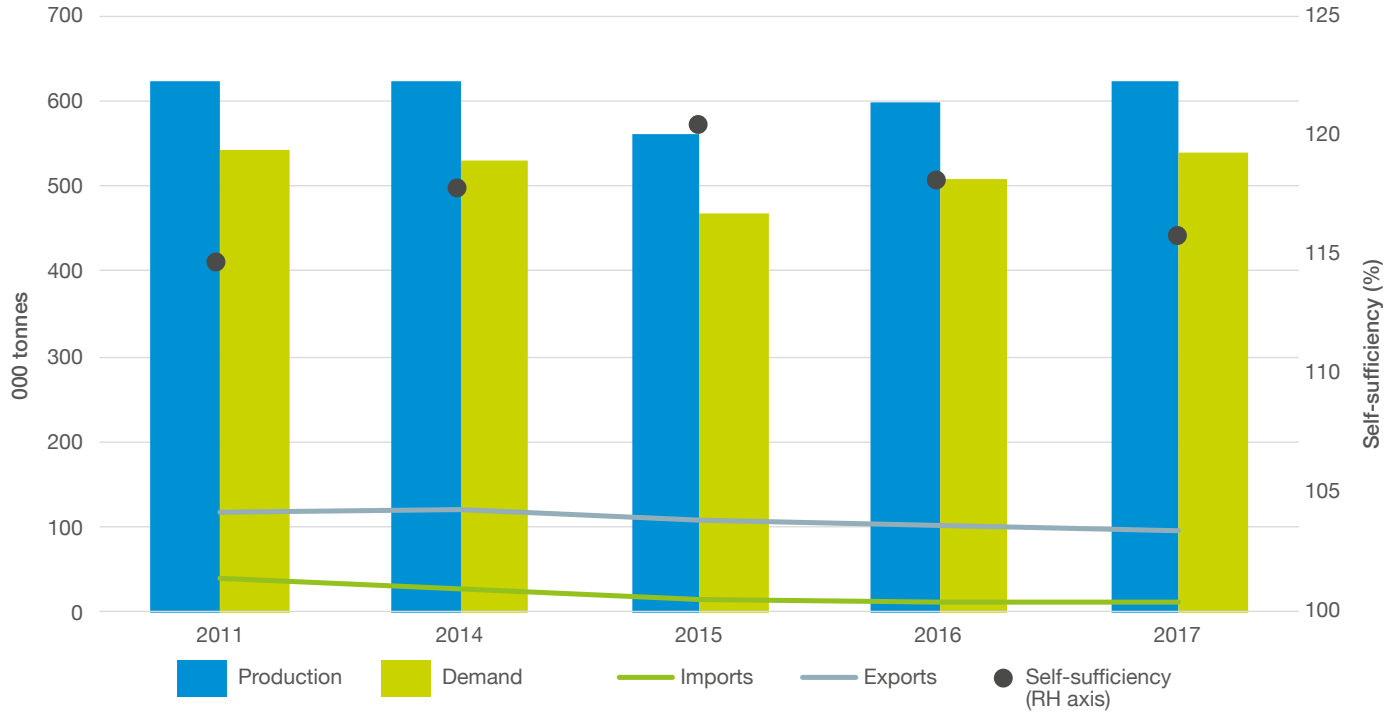


Figure 54. **UK seed potato supply and demand**

NB: Demand calculated using production + imports - exports
Source: AHDB, HMRC

How could tariffs impact potato trade?

Egypt and Morocco impose WTO third-country tariffs of 2% and 2.5% respectively on seed potato imports. However, neither imposes tariffs on imports from the EU, so, post-Brexit, the UK would have to incur these extra costs on seed potato exports to these key destinations if there is no trade agreement in place. Imports of fresh/chilled potatoes into the EU are subject to a WTO third-country tariff of 11.5%. However, under a preferential agreement, EU imports of fresh/chilled potatoes from Israel are tariff-free. Given that most non-EU fresh potato imports into the UK are from Israel, the UK may need to negotiate its own agreement with Israel unless it decides to remove tariffs on all imports. Compared with frozen potato imports, fresh potato imports are much smaller. Between 2013 and 2017, the UK imported just over 270 kt of fresh/chilled potatoes (52 kt of which were sourced from Israel), compared with almost 560 kt of frozen potato product imports.

For crisp imports, the EU imposes a WTO MFN third-country tariff of 14.1%. This could have a considerable impact on UK crisp exports, given that the majority are shipped to the EU market. In order to remain price-competitive on the export market, domestic crisp prices may have to fall.

EU tariffs on frozen potato product imports range from 14.4–17.6%, which could increase the cost of shipments into the UK and raise prices if the UK decided to impose tariffs at a similar level. At the time of writing, there is no information regarding tariff rates the UK may impose on potato product imports if there is a 'no deal' Brexit.

If the UK decided against imposing tariffs on imports from the EU, then it would have to do the same for all other nations, under WTO rules, which could increase competition for domestic producers.

The *erga omnes* TRQ for fresh potato imports into the EU is 4,295 tonnes, which is around 2% of the quantity of fresh potatoes the UK imports on average. When the UK leaves the EU, existing TRQs will be split between the two (see Appendix 1 for more details). The EU will have access to 99.9% of the *erga omnes* quota[4], although from a UK point of view, this is insignificant given the small quantity of the TRQ. This means that the majority of UK fresh potato imports could be subject to a tariff of 11.5%.

[4] Please note that this percentage split could change in the future as negotiations are ongoing.

HORTICULTURE

Steve Tones
AHDB Strategy Sector Director

The UK is heavily reliant on imported fresh produce, notably fruit, vegetables, salad crops and many ornamental plants that cannot be grown here out of season. Much of the imported fruit and many ornamental plants are imported from outside the EU. Most of these imports are tariff-free under existing EU trade agreements.

Under a 'no deal' scenario, the UK would be considered as a third country by the EU and so the trade agreements the EU has with other countries would no longer apply. However, the UK could unilaterally decide to waive the tariffs on both imported produce and on imported fertilisers, pesticides, biocontrol agents, and other materials used to grow horticultural crops in the UK. This could open the door to increased volumes of imports, possibly of a lower phytosanitary standard, but it could also make UK horticultural production more competitive. This may create notional opportunities for import displacement but in practice most growers would be unable to respond because of the now critical shortage of competent seasonal labour in the UK.

What's the current trade situation?

The main focus of the UK horticulture sector is the domestic market. While total horticulture exports have grown in recent years, they pale in comparison to the level of imports.

In 2017, total horticultural exports (excluding potatoes dried vegetables) were 737 kt, while imports of fruit and vegetables totalled approximately 7.5 Mt. Most UK horticulture exports are destined for the EU, with an average (2013–2017) of 18% shipped to non-EU countries (Figure 55), particularly Egypt.

Most UK dried leguminous vegetable exports are to Egypt, accounting for 42% of exports in 2017 (compared with the five-year average of 66%).

UK fruit imports have experienced steady growth in recent years, reaching 4.3 Mt in 2017 (Figure 56). Between 2013 and 2017, UK fruit imports were worth an average of £3.8 billion. Around 60% of UK fruit imports are from non-EU countries, with South Africa a key source.

Unsurprisingly, fruit that can't be grown in the UK comprises a considerable proportion of imports. Banana imports accounted for an average of 29% of all fruit imports between 2013 and 2017. Oranges, satsumas, clementines and mandarins comprised an average of 15% of all fruit imports over the same time period, while imports of melons were 6%, on average. Nevertheless, home-grown fruits such as apples are also imported in large numbers and accounted for an average of 11% of all fruit imports from 2013 to 2017.

UK vegetable imports (excluding potatoes) were worth £3.2 billion in 2017 (five-year average: £2.9 billion). Around 80% of vegetable imports are from the EU, particularly Spain and the Netherlands (Figure 57).

The data for UK vegetable imports includes provisionally preserved, cooked, frozen and dried vegetables.

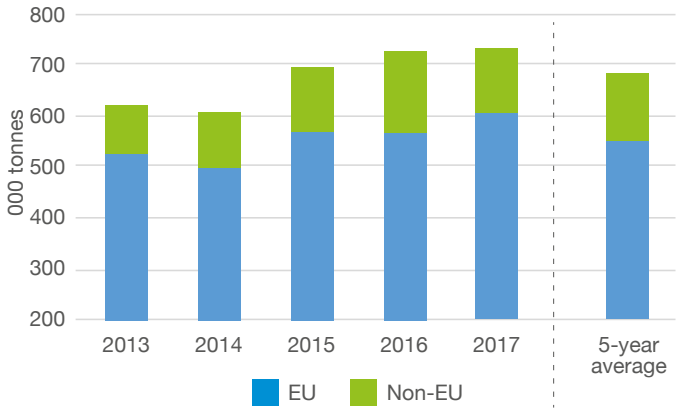


Figure 55. **UK horticulture exports (excluding potatoes and dried vegetables)**

Source: HMRC

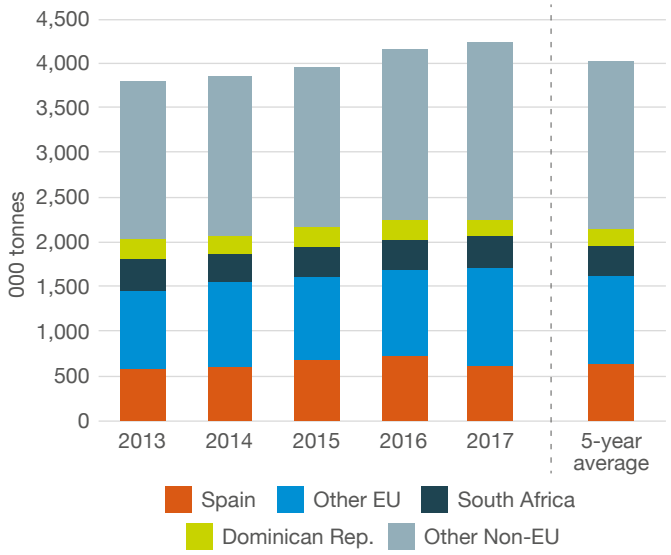


Figure 56. **UK fruit imports**

Source: HMRC

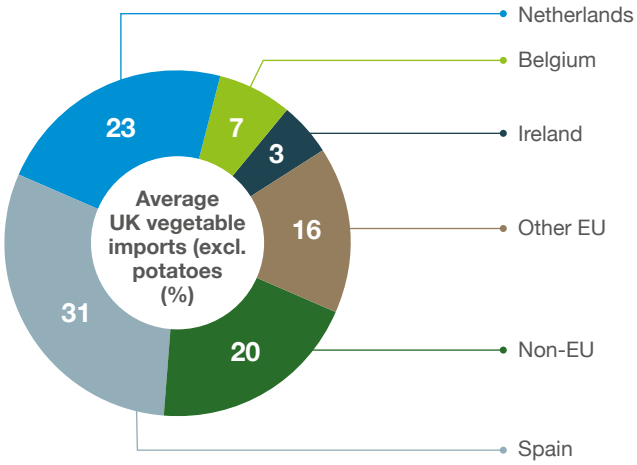


Figure 57. **Average UK vegetable imports (excluding potatoes), 2013–2017**

Source: HMRC

Tomatoes and onions accounted for an average (2013–2017) of 13% and 10% respectively of all vegetable imports (excluding potatoes). UK tomato imports were worth an average of £431 million (2013–2017), but were £494 million in 2017 due to higher tomato prices. The average value of UK onion imports (2013–2017) was £123 million.

For fresh/chilled vegetables (excluding potatoes), imports averaged 2.06 Mt between 2013 and 2017, with 87% sourced from the EU (particularly Spain).

Imports of processed/prepared vegetable and fruit products from 2013–2017 were 3.04 Mt on average, with an average value of £2.5 billion. Fruit juices comprise a considerable share of processed horticultural goods imports, worth £681 million on average (2013–2017).

Imports of ornamental horticulture products have grown in recent years, reaching over 415 kt in 2017 (Figure 58). From 2013 to 2017, on average, 91% of ornamental horticultural goods were sourced from the EU, predominantly from the Netherlands (although the 'Rotterdam effect' may be at play here).

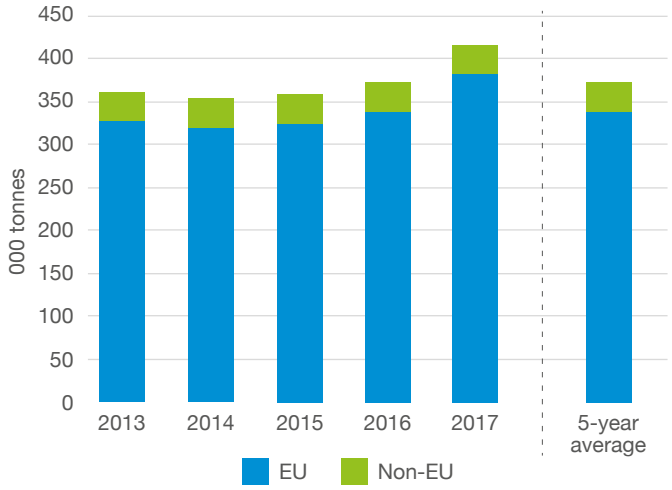


Figure 58. **UK imports of plants and cut flowers**

Source: HMRC

Kenya and Colombia are the main non-EU origins for cut flowers. Cut flowers have comprised 36% of all ornamental horticultural produce on average (2013–2017). In value terms, based on the five-year average, cut flower imports have comprised 36% of the total value of ornamental horticultural product imports.

What does the domestic supply and demand situation look like?

Domestic production of fruit is considerably lower than that of fresh vegetables (Figure 59). Therefore, the UK is more dependent on fruit imports to satisfy demand, compared with vegetables. As a result, the UK's self-sufficiency ratio for fruit is lower than that for vegetables. Continued access to fruit imports at similar prices will be of great importance following Brexit.

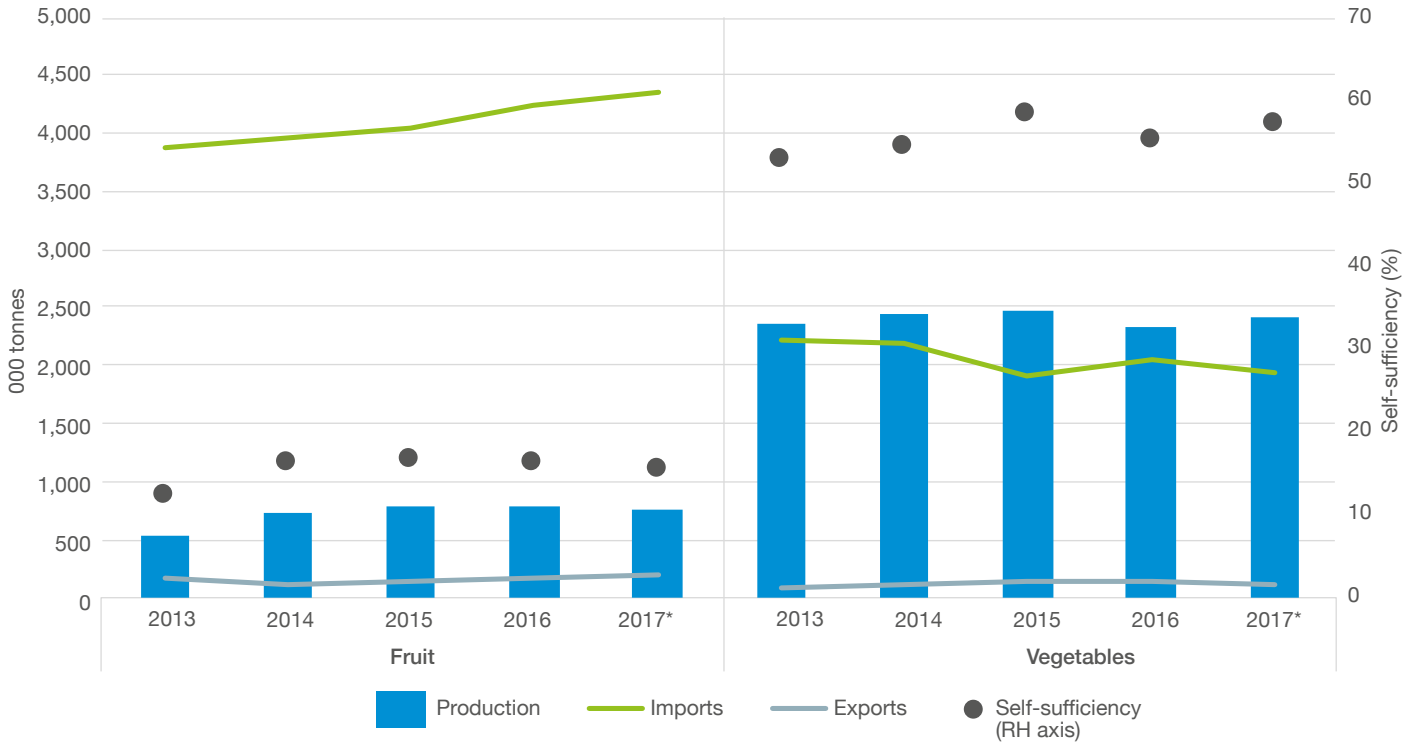


Figure 59. **UK Fruit and vegetable supplies**

*2017 production figure is provisional ~ Fresh/chilled vegetables, excluding potatoes
NB: Consumption figures used for self-sufficiency calculation were derived using production + imports - exports.
Source: Defra, HMRC

What impact could tariffs have?

The EU imposes a third-country duty of €114/t on fresh banana imports. There are instances where there is a lower tariff for certain countries due to trade agreements (e.g. banana imports from Colombia are subject to a tariff of €89/t). Countries that come under the CARIFORM – EU Economic Partnership Agreement, such as the Dominican Republic, can export bananas to the EU tariff-free. If the UK adopts the EU's third-country tariff rate on banana imports, then this could lead to higher prices for consumers, at least until other trade deals or arrangements are made.

As Table 7 shows, the third-country tariff on imports of fresh oranges – one of the main fruits imported – is fairly high. It was mentioned earlier that despite domestic production, apples are imported in high numbers. However, if tariffs are imposed, this may influence import substitution by producing more domestically.

Tomatoes and onions, which comprise around a quarter of all vegetable imports, may be subjected to variable tariffs and a tariff of 9.6% respectively if the UK sets similar import tariffs as the EU.

At the time of writing, details of tariff rates the UK may impose on imports in a 'no deal' Brexit were not available.

Tariffs on processed fruit and vegetable products tend to be higher than those on the raw products and are designed to offer protection to the EU's processors.

Table 7. **EU third-country tariffs on selected fresh fruit and vegetable imports**

Code	Commodity	Tariff
08039010	Bananas	€114/t; 19% ad valorem (2017)
080510810	Oranges	16%
08071100	Watermelons	8.8%
080400010	Avocados	5.10%
0804500010	Mangoes	0%
080810	Apples	Varies depending on rate and price
0702	Tomatoes	8.8% (1 Jan–14 May, 1 Nov–31 Dec), 14.4% (15 May–31 Oct) and variable amount depending on price
070310	Onions	9.6%
0706100010	Carrots	13.6%
0707	Cucumber	12.8% (1 Jan–15 May, 1 Nov–31 Dec), 16% (16 May–31 Oct) and variable amount depending on price
070810000	Peas	8.0%
070930000	Aubergines	12.8%
0709601000	Sweet peppers	7.2%

GLOSSARY

ad valorem	amount paid as a percentage of the price
COMESA	Common Market for Eastern and Southern Africa
CWE	carcase weight equivalent
erga omnes	towards everyone – i.e. TRQ available for all countries
DCFTA	deep and comprehensive free trade area
EPA	economic partnership agreement
FTA	free trade agreement
GI	geographical indication
MFN	most favoured nation
SPS	sanitary and phytosanitary
TRQ	tariff rate quota
WTO	World Trade Organisation

APPENDIX 1 – BACKGROUND INFORMATION

Current free trade agreements and negotiations

Trade relationships outside the EU are currently coordinated through the Common Commercial Policy. Within the European Commission, a trade commissioner leads negotiations in multilateral and bilateral trade talks on behalf of the EU and its member states. As a result of these, the EU currently has FTAs with 68 countries, including Canada, Japan, Singapore, Chile and South Korea. Trade talks are also ongoing with other parts of the world, as shown in Figure A1. In 2018, the EU started free trade negotiations with Australia and New Zealand.

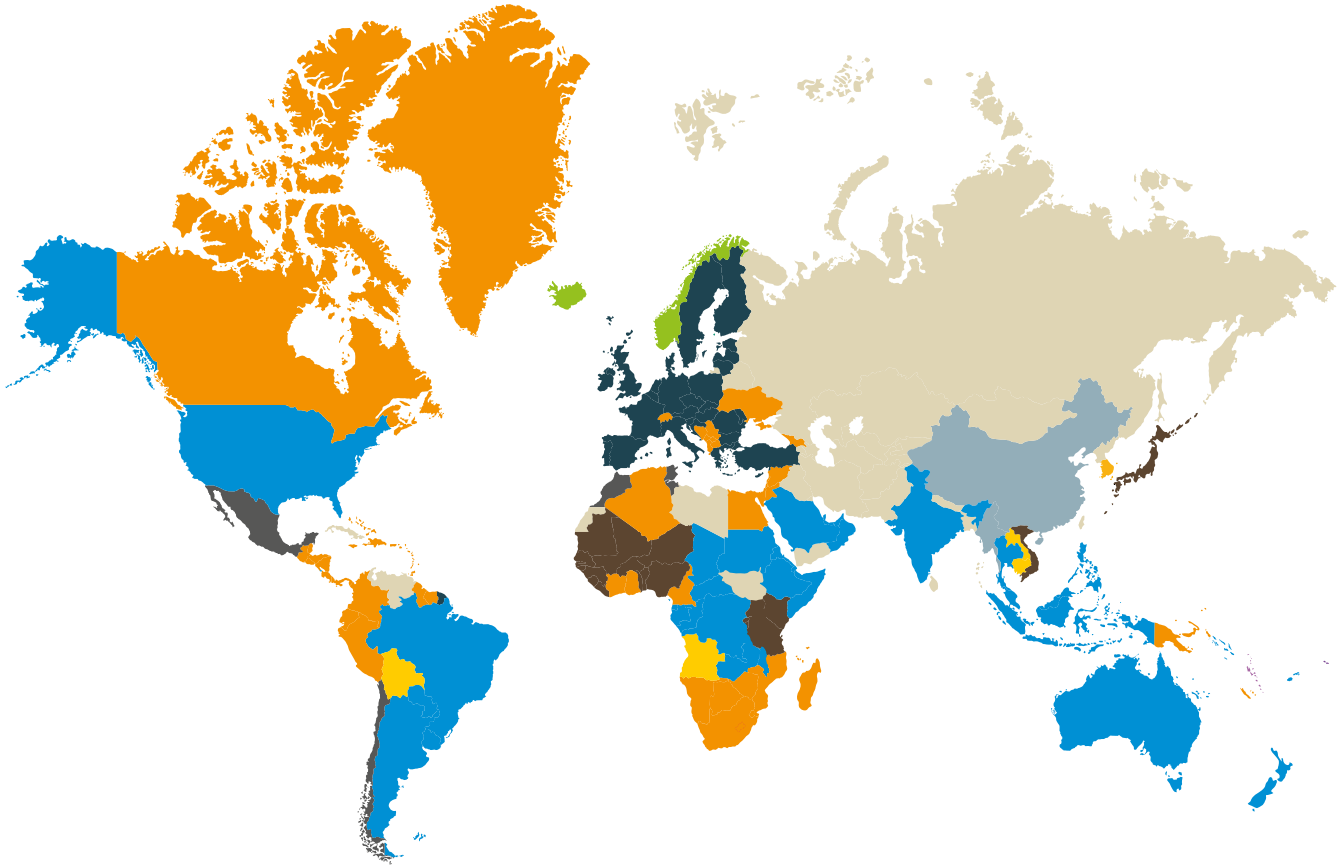


Figure A1. **The state of EU trade, October 2018**

Source: European Commission

- EU & Customs union (Andorra, Monaco, San Marino, Turkey)
- European Economic Area (Norway, Iceland, Liechtenstein)
- Applied preferential trade agreement (FTA, EPA, DCFTA)
- Preferential agreement awaiting application
- Pending negotiations for a preferential trade agreement
- Potential preferential trade partners
- Pending negotiations for a stand-alone investment agreement
- Preferential agreement in the process of modernisation

The UK's access to the FTAs the EU has in place with other countries will continue to apply if there is a transition period and this may be extended if an agreement of the UK and EU's future relationship is not agreed within the timeframe. The UK Government has been in negotiations with these countries to put in place similar arrangements for when the UK leaves the EU.

In the event of a 'no deal' Brexit, the UK will no longer be able to benefit from the FTAs the EU has with other countries. While the UK Government has been negotiating new arrangements, it is unclear how many of the FTAs will be complete by 29 March 2019.

Both the EU and the UK also have many bilateral agreements in place with a wide variety of countries, which govern aspects of trade. In many cases, these will cover technical aspects, such as sanitary and phytosanitary (SPS) measures, export certification or inspection processes. Other examples involve providing access to tariff rate quotas (TRQs) for specific products.

The vast majority of such bilateral agreements made by the UK rely on the fact that it is subject to EU rules and regulations. Many of these bilateral agreements will require renegotiation to reflect the new situation. This may apply to existing UK bilateral agreements as well as those previously handled at EU level. Although agreements of this kind are likely to be simpler to implement than full FTAs, failure to do so could close off trade with the countries involved, at least temporarily. While many of these agreements can probably be updated quickly, some are likely to require significant time, for example because of the need for inspection or other assessment of any new regulations.

Import tariffs

Customs duties on merchandise imports are called tariffs. Tariffs can give a price advantage to locally produced goods over similar goods which are imported and they also raise revenues for governments. One result of the WTO Uruguay Round of negotiations was countries' commitments to cut import tariffs and to bind their tariff rates to levels which are difficult to raise. The latest negotiations (part of the Doha round) have stalled and the WTO is currently facing structural issues. Nevertheless, the role of the WTO and understanding its international trade framework is critical as the UK prepares to leave the EU single market. Further details can be found in the AHDB Horizon report, The WTO and its implications for UK agriculture.

Tariff rates can be set in a number of different ways. The most common type is an 'ad valorem' tariff, in which the amount paid is a percentage of the price of the item being imported. Ad valorem tariffs are widely used by the EU and by many other countries. An alternative is to set a tariff at a fixed amount in monetary terms per unit (usually based on weight). Tariffs may also be a mix of ad valorem and fixed amounts.

Some tariffs may vary seasonally, usually for products where supply levels, either globally or within the importing country, depend on the time of year.

Tariffs for processed products are sometimes more complex, being based on a formula which takes account of the quantity of different components which are used to make up the product. EU tariffs on processed products are typically higher than those for raw materials, as this makes it more cost-effective to import raw materials and process them within the EU, giving some protection to processing industries.

Examples of EU import tariffs for selected agricultural and food products are discussed in the main report and can also be found in Appendix 2. These examples cover some of the most important categories of UK exports to, and imports from, the EU and are intended to illustrate the potential impact if trade with the EU in these products was subject to tariffs.

Under its reform programme, WTO members converted some of their non-tariff measures to equivalent bound tariffs. The new rule for market access in agricultural products is 'tariffs only'. Before the Uruguay Round, some agricultural imports were restricted by quotas and other non-tariff measures. These have been replaced by tariffs that provide more or less equivalent levels of protection — if the previous policy meant domestic prices were 75% higher than world prices, then the new tariff could be around 75%.

Tariff rate quotas

Tariff rate quotas (TRQs) allow a specified quantity of produce to enter the market at a reduced (or zero) tariff. Once the limit has been reached, the tariff reverts to the standard external tariff rate. TRQs are used to protect industries which would be vulnerable to international competition but where there is a desire to allow a certain level of imports, for example to ensure market stability. Quotas can be specific to one exporting country, a group of specified countries or can be open to all suppliers.

The EU currently operates a number of TRQs covering agricultural products. In October 2017, the UK and EU reached an agreement over how existing TRQs are split between them following Brexit. The UK's allocation is to be based on the UK's average usage (expressed in percentage terms) of each quota from 2013–2015. For example, if the UK's average usage of a particular TRQ between 2013 and 2015 was 35%, then it would be entitled to 35% of that TRQ after Brexit, and the EU would be entitled to 65% of the TRQ. The overall TRQ volume for the third-country trading partner would stay the same. Third parties such as the USA, Canada, Australia and New Zealand have opposed this division of TRQs, stating that it puts them at a disadvantage by reducing flexibility.

Although negotiations with trading partners are still ongoing, the EU is taking steps to ensure that the division of TRQs according to the proposed methodology is legally in place after 29 March 2019. If, as a result of ongoing negotiations, any adjustments need to be made to the TRQ splits, these will be made retrospectively.

Recent agreements, such as the EU–Canada trade deal, have included TRQs for some 'sensitive' agricultural products. This allows products from the exporting country to gain some access to the importing market, while still providing a degree of protection to domestic production. This would usually be balanced by similar concessions on access for other 'sensitive' products in reverse.

Non-tariff barriers

Non-tariff barriers include sanitary and phytosanitary (SPS) measures and technical barriers to trade. WTO rules state that SPS measures should be applied only to the extent necessary to protect human, animal or plant life or health. Therefore, there is a balance between ensuring imported food is safe to eat for domestic consumers, while at the same time ensuring that regulations put in place are not being used to protect domestic producers. Also, they should not arbitrarily or unjustifiably discriminate between countries where identical or similar conditions prevail.

In practice, these measures are often the hardest to agree in trade agreements, as seen in the recent Transatlantic Trade and Investment Partnership (TTIP), where issues such as antimicrobial treatments and hormone-treated beef are highly contentious.

Technical barriers to trade can also become obstacles, but they are often deemed necessary for a range of reasons, from environmental protection, safety, national security to consumer information. Therefore, the same basic question arises again: how to ensure that standards are genuinely useful and not arbitrary or an excuse for protectionism. Examples of technical barriers to trade include country-of-origin labelling and restrictions on importation of genetically modified products.

If the UK leaves the EU customs union and single market, there is likely to be increased bureaucracy and costs for trade between the UK and EU. This 'trade friction' includes customs checks at borders and extra paperwork, such as export health certificates for exporting live animals and products of animal origin, as well as sanitary and phytosanitary checks.

Trans-shipment and the 'Rotterdam effect'

Trans-shipment means the unloading of goods from one ship and its loading into another to complete a journey to a further destination. The term can also be applied more generally to other transport modes, such as freight transport by road, rail or air, or any combination of them.

Trans-shipment is significant for many UK exports, which are currently initially shipped to another EU country before being sent on to their ultimate destination. While this involves many different EU destinations, by far the most significant is the Netherlands. This is because of the size and importance of the port of Rotterdam, both as an entry point to the rest of Europe and for shipments to other parts of the world.

This gives rise to the so-called 'Rotterdam effect' – the theory that recorded trade in goods with the Netherlands is artificially inflated by those goods routed through Rotterdam, despite the ultimate destination or country of origin being elsewhere. The 'Rotterdam effect' can distort views of the UK's trade relationship with EU and non-EU countries. For example, agricultural goods exported from countries outside the EU to Rotterdam and re-exported to the UK may be counted as an import from the EU rather than a non-EU import. Conversely, a product exported by the UK to Rotterdam and subsequently transited to a non-EU country may be counted as an export to the EU rather than to the rest of the world. Requirements for export health certification may mean this is less of an issue for exports than for imports, though.

Overall, across all goods, the Netherlands is the UK's third largest trading partner in the EU. However, it is not possible to estimate with any certainty the impact that the 'Rotterdam effect' has on UK trade with the Netherlands and its subsequent impact on the balance of UK trade between EU and non-EU countries.

If tariffs are imposed on trade between the UK and the EU, it might affect the UK's ability to route products via Rotterdam. This could have an impact on its trade with countries outside the EU as well as within it as availability of shipping direct from the UK will be more limited, which may mean higher costs.

In many FTAs, a direct transport rule ensures that the goods arriving in the country of importation are identical to those goods that left the country of exportation. The objective of this rule is to reduce the chance that goods eligible for preferences under a free trade arrangement will be manipulated or mixed during transportation with non-eligible goods. This means that the direct transport rule is in fact not an 'origin rule', per se, but an administrative requirement to prevent circumvention and abusive manipulations of originating goods during transportation.

However, due to the changes in transportation methods and routes, an emerging trend on a global level is to move away from a very strict requirement in relation to direct transportation or direct consignment.

APPENDIX 2 – EU IMPORT TARIFF RATES

Within a report of this kind, it is impractical to list tariff rates for all agricultural products. The tables below, therefore, cover a selection of the main raw and processed agricultural products exported by the UK to the rest of the EU. This will give an idea of the barriers which will face UK exporters in the event that exports to the EU are subject to these tariffs.

Meat

Code	Product	Tariff rate	Effective ad valorem rate (2015 export unit prices)	Effective ad valorem rate (2017 export unit prices)
02011000	Fresh/chilled cattle carcases	12.8% + €176.8/100 kg	84%	113%
02013000	Fresh/chilled beef, boneless	12.8% + €303.4/100 kg	65%	65%
02023090	Frozen beef, boneless	12.8% + €304.1/100 kg	89%	113%
02031110	Fresh/chilled pig carcases	€53.6/100 kg	50%	42%
02031955	Fresh/chilled pork, boneless	€86.9/100 kg	43%	36%
02041000	Fresh/chilled lamb carcases	12.8% + €171.3/100 kg	46%	48%
02042100	Fresh/chilled sheep carcases	12.8% + €171.3/100 kg	45%	48%
02042290	Fresh/chilled sheep meat, bone-in, excluding short forequarters, chines/best ends	12.8% + €222.7/100 kg	51%	53%
02071310	Fresh/chilled chicken, boneless	€102.4/100 kg	27%	66%
02071460	Frozen bone-in chicken legs	€46.3/100 kg	41%	48%

Dairy

Code	Product	Tariff rate	Effective ad valorem rate (2015 export unit prices)	Effective ad valorem rate (2017 export unit prices)
04012099	Milk and cream, fat content 3–6%, not concentrated or sweetened	€21.8/100 kg	74%	63%
04015039	Milk and cream, fat content 21–45%, not concentrated or sweetened	€109.1/100 kg	50%	37%
04021019	Milk and cream in solid forms, unsweetened, fat content <=1.5%	€118.8/100 kg	63%	79%
04022919	Milk and cream in solid forms, sweetened, fat content 1.5–27%	€1.31/kg of lactic material + €16.8/100 kg net	n/a	n/a
04041002	Whey in solid forms, unsweetened, protein content <=15%, fat content <=1.5%	€7.0/100 kg	6%	8%
04051019	Natural butter, fat content <=85% in packs of >1 kg	€189.6/100 kg	63%	41%
04059010	Fats and oils derived from milk, fat content >=99.3%	€231.3/100 kg	63%	41%
04061030	Fresh mozzarella	€185.2/100 kg	41%	43%
04061080	Unripened or uncured cheese, fat content >=40%	€221.2/100 kg	68%	67%
04069021	Cheddar cheese (not grated or for processing)	€167.1/100 kg	42%	40%

Vegetables

Code	Product	Tariff rate
07011000	Seed potatoes	4.5%
07019090	Fresh/chilled potatoes, excluding new, seed and potatoes for manufacture of starch	11.5%
07032000	Fresh/chilled garlic	9.6% + €120/100 kg
07041000	Fresh/chilled cauliflowers and broccoli	9.6% – 13.6%
07051900	Fresh/chilled lettuce	10.4%
07061000	Fresh/chilled carrots and turnips	13.6%
07101000	Frozen potatoes, uncooked or boiled/steamed	14.4%
07102100	Frozen peas, uncooked or steamed/boiled	14.4%
07108095	Various frozen vegetables, uncooked or boiled/steamed (not elsewhere specified)	14.4%
07142010	Whole fresh sweet potatoes	3.8%

Cereals

Code	Product	Tariff rate	Effective ad valorem rate (2015 export unit prices)	Effective ad valorem rate (2017 export unit prices)
10011900	Durum wheat (excl. seed)	€148/t	63%	25%
10019120	Seed of wheat/meslin	€95/t	50%	53%
10019900	Wheat and meslin (excl. seed and durum wheat)	€95/t	53%	53%
10031000	Seed of barley	€93/t	44%	14%
10039000	Barley (excl. seed)	€93/t	53%	54%
10041000	Seed of oats	€89/t	49%	19%
10049000	Oats (excl. seed)	€89/t	30%	37%
10059000	Maize (excl. seed)	€94/t	49%	50%
10063067	Milled long-grain rice, parboiled	€175/t	23%	29%
10063098	Milled long-grain rice (excl. parboiled)	€175/t	12%	20%

Processed Meat

Code	Product	Tariff rate	Effective ad valorem rate (2015 export unit prices)	Effective ad valorem prices (2017 export unit prices)
16010099	Cooked sausages (excl. liver sausages)	€100.5/100 kg	35%	31%
16023211	Uncooked processed chicken (>=57% meat)	€276.5/100 kg	66%	75%
16023219	Cooked chicken (>=57% meat)	€102.4/100 kg	27%	42%
16023230	Processed chicken (25–57% meat)	€276.5/100 kg	88%	92%
16023290	Processed chicken (<25% meat)	€276.5/100 kg	88%	49%
16023929	Other cooked poultry meat (>=57% meat)	€276.5/100 kg	51%	48%
16024110	Processed hams	€156.8/100 kg	26%	45%
16024950	Processed pig meat (<40% meat)	€54.3/100 kg	26%	22%
16025010	Uncooked processed beef	€303.4/100 kg	71%	68%
16025095	Cooked beef (excl. corned beef)	16.6%	n/a	n/a

Processed fruit and vegetables

Code	Product	Tariff rate
20041010	Frozen cooked potatoes	14.4%
20041099	Other frozen potato products	17.6%
20052020	Crisped potatoes	14.1%
20052080	Other non-frozen potato products	14.1%
20055100	Processed non-frozen beans	17.6%
20059950	Processed non-frozen mixed vegetables	17.6%
20059980	Other non-frozen vegetables	17.6%
20079997	Jams, jellies and marmalades	24.0%
20081110	Peanut butter	12.8%
20091200	Orange juice	12.2%


TARE
3.840 KGS
8.470 LBS
MAX. CARGO
CU. CAP.
28.660 KGS
63.180 LBS
76.4 CU.M.
2.698 CU.FT.
928664 0
45G1
MAX. GROSS
TARE
32.500 KGS
71.650 LBS
3.840 KGS
8.470 LBS
MAX. CARGO
CU. CAP.
28.660 KGS
63.180 LBS
76.4 CU.M.
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CAUTION
9'6"
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CONTAINER
606295 7
45G1
635423 9
45G1
MAX. WT.
32.500 KGS
71.650 LBS
3.820 KGS

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