

Possible impacts of a hard Brexit on UK sheep meat production

February 2019

Analysis by various organisations, including AHDB, have highlighted that the sheep industry is potentially very sensitive to a “hard” Brexit, perhaps more so than other sectors. A loss of access to European markets could be very disruptive to the sheep industry. The impact highlighted within the reports have been investigated further from a UK production point of view, in order to demonstrate how sheep meat production might change in the period following Brexit. This analysis shows the circumstance where tariff free access to Europe for sheep meat is lost, and where sheep meat imports from New Zealand may or may not be diverted to Europe. It examines reactions to possible changes in tariff free access over two different timescales.

In October, AHDB published a sheep forecast which had as its basic assumption continued access to Europe and broadly business as usual trade conditions. Brexit however brings significant risks to this assumption. Uncertainty, and the vulnerability of the sector to a no deal Brexit has been modelled elsewhere. The analysis below is intended to describe several possible supply scenarios under a no-deal Brexit for the UK sheep industry.

AHDB have released [various reports analysing potential changes for UK agriculture post-Brexit](#). Also available are some tools for farmers that allow them to evaluate what Brexit could mean for their farm based upon the [AHDB Brexit scenarios](#).

October forecast

In the [October forecast](#) AHDB assumed that business as usual conditions within the market would remain post-Brexit. This meant that trade flows would continue as they are now with the EU, with no material non-tariff or tariff barriers put in place. It was also assumed that farmgate prices would remain as a typical level, as would all input costs.

The main message in the forecast was that the 2018 lamb crop would be around 6% (1.1 million head) lower year-on-year, at 17 million head which has now been confirmed. This was entirely due to the weather conditions at lambing. Another effect of the weather at lambing is that the breeding flock for the 2019 lamb crop is forecast to decline by 3% to 14.5 million head, due to higher mortality at lambing, but also uncertainty surrounding Brexit affecting investment.

Overall this means that clean sheep slaughterings declined by almost 4% year-on-year in 2018, and are forecast to slip again in 2019. Sheep meat production in 2018 declined by 4%, and then to remain reasonably steady this year. Sheep meat imports are forecast to remain stable over the coming years. Exports are likely to reflect changes domestic production.

October forecast — January review: Forecast supplies of sheep meat

000 tonnes cwe	2017	2018	2019	2020	2021
Production	299	288	286	291	293
Imports (a)	95	91	92	92	92
Exports (a)	94	84	83	91	97
Available for consumption	300	296	295	292	288

(a) Carcase weight equivalent

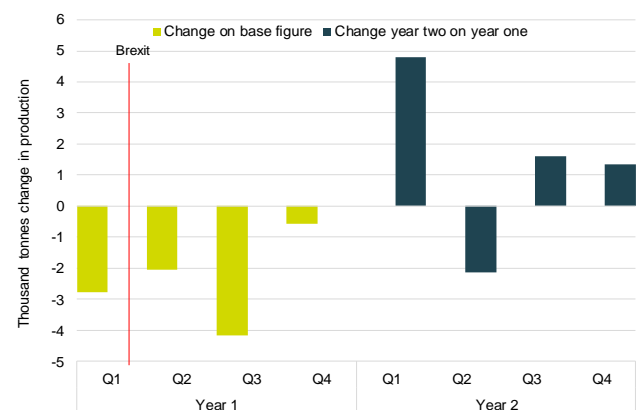
All figures subject to revision. Forecasts in bold.

Totals may not sum due to rounding.

Business as usual situation is presumed for post-Brexit trade.

Source: Defra, AHDB, IHS Maritime & Trade— Global Trade Atlas®, HMRC

October forecast: Potential change in UK sheep meat production



Source: AHDB, Defra

Forecast for a 'hard' Brexit

Within the following analysis it is assumed there is no Brexit transition period, and therefore any changes take place from April 2019, or even before. Any decline has been based against the five year average (2014-2018) of sheep meat production. This five year average currently stands at 295,300 tonnes cwe, referred to hereafter as the base sheep meat production figure. It is assumed under all scenarios that the lamb crop will be around half a million head smaller than the five year average, and this is the forecast lamb crop figure for 2019 used in the October outlook.

For the purpose of this analysis two potential time periods for change have been investigated. In a rapid response the sheep industry would see significant pick up in production during the first year, followed by a sharp decline during the second year. Alternatively, declines may take place at a slower rate over several years.

Potential decline in production based upon New Zealand diverting product

In August 2017 '[Impacts of Alternative Post-Brexit Trade Agreements on UK Agriculture: Sector Analyses using the FAPRI-UK model](#)' was published, identifying three possible scenarios for Brexit trade: Bespoke Free Trade

Agreement (FTA) with the EU, World Trade Organisation (WTO) default Most Favoured Nation (MFN) tariffs, and Unilateral Trade Liberalisation.

Under both the *WTO default* and *Unilateral Trade Liberalisation*, the report suggests that UK sheep meat production could decline by 11% by 2025 with prices declining by 30% and 29% respectively. These changes are compared with 2016 levels. Something to consider is that since the FAPRI report was published global farmgate prices for lamb have increased significantly, which would be expected to lessen the negative price impacts described in the report.

Forecast effect on UK sheep sector according to FAPRI report

	Bespoke FTA with the EU	WTO default	Unilateral Trade Liberalisation
Price	-1%	-30%	-29%
Production	0%	-11%	-11%
Output value	-1%	-38%	-36%

Agra CEAS Consulting, which produced the model for AHDB's Horizon reports [Brexit Scenarios: an impact assessment](#), suggested that an 11% decline in national output would broadly correlate to its own findings. The AHDB report focused on farm business income, and did not itself address potential changes in national output.

An 11% decline in domestic sheep meat production, would be consistent with a situation where new tariff barriers between the EU and UK prevented trade flows of the majority, if not all sheep meat, in either direction. It would also fit with imports of sheep meat from New Zealand being diverted as much possible towards the EU market. This is because it would be expected that prices in the EU rise as that market becomes shorter of supply, while prices in the UK fall where the situation would be one of oversupply.

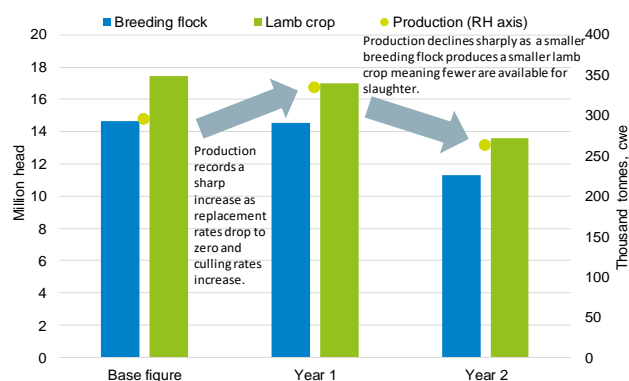
In this case, because of the mix of products that each market demands, some shipments, mainly legs, would probably continue to come to the UK from New Zealand despite a lower market price. Under this scenario the UK market would be oversupplied by approximately 33,000 tonnes of sheep meat products, and the EU market short by the same amount.

11% Rapid response scenario

Under a rapid response to no deal it is expected that year one production would record a 13% increase on the base figure, to 334,200 tonnes. Within this there is a significant increase in both lamb and adult sheep

slaughterings. The breeding flock would record contraction of 22%. During year two production would total 262,600, a 21% year-on-year decline and 11% below the base figure.

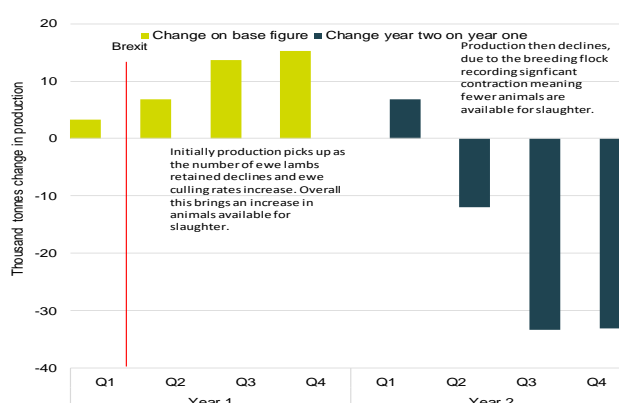
11% Rapid response: Potential change in UK breeding flock, lamb crop and production



Source: Defra, AHDB

Under this rapid response scenario, production would increase at first, as lamb retention rates drop sharply driving the increase in lamb slaughterings. Culling rates would record significant uplift driving the increase in adult sheep slaughterings. Quarter one of year two records a year-on-year uplift in slaughterings as the remainder of the year-one lamb crop are slaughtered. This would actually then mean that production in year three and year four would be lower than in year two as they do not have a large carry over to keep production up.

11% Rapid response: Potential change in UK sheep meat production



Source: Defra, AHDB

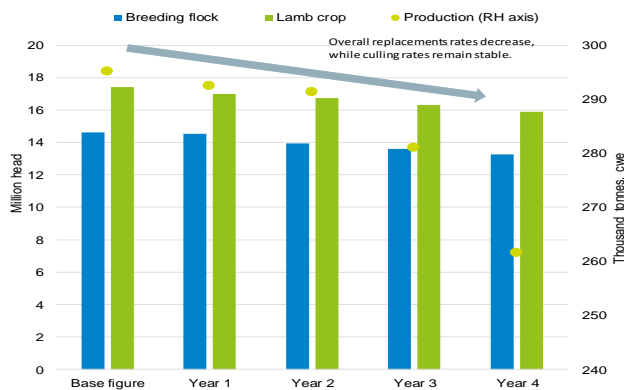
During quarter one of year one it is assumed that a late flush of lambs comes forwards ahead of Brexit and therefore despite there being smaller lamb crops, slaughterings rise compared with the base figure. It is assumed that numbers will continue to rise above base figures as the crop comes forwards and fewer ewe lambs are retained. Production might be especially strong at the back end of the year as farmers make decisions

surrounding numbers put to the top.

11% Gradual response scenario

Under a more gradual response scenario it would not be until year four when the UK records an 11% decline in production on the base figure. As the decline would take place more gradually the breeding flock would not record such a sharp decline in the years following Brexit than in the rapid response scenario.

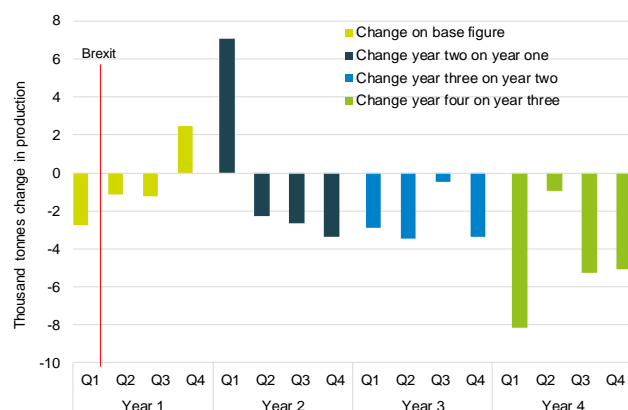
11% Gradual response: Potential change in UK breeding flock, lamb crop and production



Source: Defra, AHDB

Initially the decline in production is somewhat tempered as fewer lambs are retained for the breeding flock making them available for slaughter. During year one production declines by just 1% on the base figure despite a 3% decline in the size of the lamb crop. Production then remains steady year-on-year during year two, before recording sharp declines during years three and four, 4% and 7% respectively.

11% Gradual response: Potential change in UK sheep meat production



Source: Defra, AHDB

In summary under a rapid response scenario the national flock would be culled to reduce size whereas under a gradual response the national flock would reduce in size through a reduction in ewe replacements.

Under both scenarios no changes to seasonality in

slaughtering are modelled; the last time there was wholesale change for the sector was the removal of headage payments, and little change in the seasonal slaughter pattern was observed. This is a risk to this forecast.

Decline based upon amount of lamb carcasses exported and New Zealand not diverting shipments

With around a third of production exported, rather than using the 11% figure based upon New Zealand making some switch in trade flows, a different outcome for production post-Brexit might be described.

This other outcome would be based upon New Zealand choosing not to, or not being able to change its trade flows. In this case the UK market balance would be oversupplied by over 50,000 tonnes. This is equal to the amount of sheep meat that the UK exports as carcasses, around 60% of its exports.

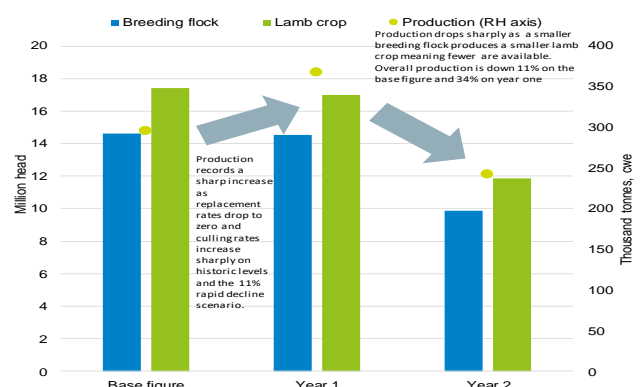
Trade in other lamb cuts shipped between the UK and the EU broadly net off with each other in volume terms, at about 17,000 tonnes in each direction. However, above this UK exports carcasses amounting to approximately 18% of UK sheep meat production, equivalent to around three million lambs.

The 11% decline analysed earlier would be equivalent to around 33,000 tonnes, but the following two scenarios look into a rapid and gradual responses this 18% decline in production (or 53,000 tonnes) - equivalent to the UK carcass trade, the UK net trade position with the rest of the EU.

18% Rapid response

Similar to the 11% rapid response scenario, under the 18% rapid response scenario, production would also increase at first and then decline. Again in a similar manner to the 11%, replacements would drop to zero, but this time ewe cullings would also increase.

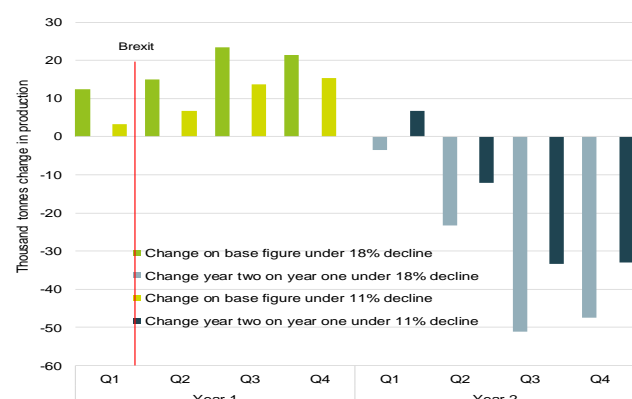
18% Rapid response: Potential change in UK breeding flock, lamb crop and production



Source: Defra, AHDB

During year one, production would rise 24% on the base figure, to 367,700 tonnes. In the second year production would decline year-on-year by 34% to stand 18% below the base figure. Similar to the 11% rapid response situation production would continue to decline slightly during year three as there would not be the available carry over to support production levels.

18% Rapid response: Potential change in UK sheep meat production

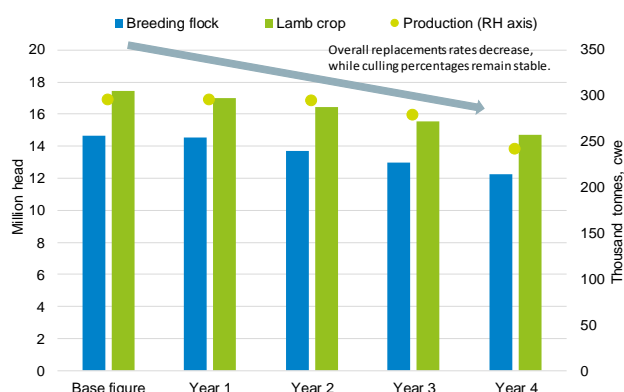


Source: Defra, AHDB

18% Gradual response

As in the previous 11% gradual response scenario, culling rates remain in line with historic trends, and it is ewe replacements which record declines. This time however, in a change from the 11% gradual response scenario where a decline was recorded during year one, production in the 18% scenario remains steady during the first year, and does not begin to record significant declines until year three. This is because although there are declines in size of lamb crops, carry-over supports production slightly, although this effect is diminished in later years.

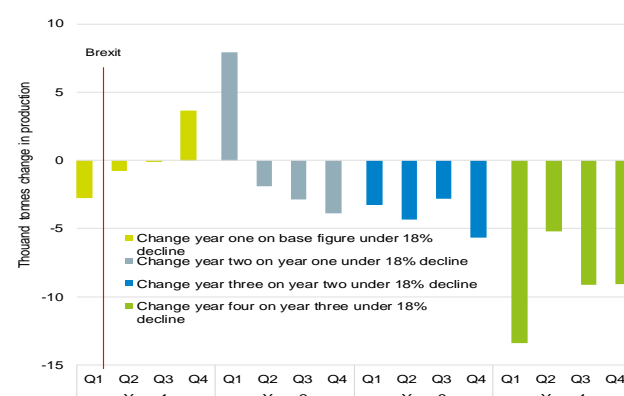
18% Gradual response: Potential change in UK breeding flock, lamb crop and production



Source: Defra, AHDB

During year one and two production would remain steady on the base figure, with a 5% year-on-year decline during year three. It is not until year four that a significant reduction is recorded (-13%).

18% Gradual response: Potential change in UK sheep meat production



Source: Defra, AHDB

Potential clean sheep slaughterings under each scenario

000 head	11% Rapid response	18% Rapid response	11% Gradual response	18% Gradual response
Year 1	13,975	13,975	12,914	13,052
Year 2	11,753	10,922	12,862	13,075
Year 3			12,420	12,378
Year 4			11,587	10,697

Source: Defra, AHDB

Potential adult sheep slaughterings under each scenario

000 head	11% Rapid response	18% Rapid response	11% Gradual response	18% Gradual response
Year 1	2,490	3,794	1,659	1,657
Year 2	1,344	1,172	1,644	1,606
Year 3			1,581	1,504
Year 4			1,450	1,341

Source: Defra, AHDB

Longer term possible effects and summary

Where might the breeding flock disappear?

Where the breeding flock numbers decrease the most will have an impact on the ability of the national breeding flock to sustain itself, grow again in the future and if it does, also the rate at which it might recover.

Should breeding ewes disappear from the uplands and hills, the breeding flock may not be able to grow as quickly and easily again in the future, than if breeding ewes numbers are reduced in the lowlands. This is due to the stratified production system, and the fact that uplands ewes are hefted. The loss of this characteristic will limit the ability of hill flocks to recover.

In reality, ewes are possibly likely to significantly reduce in the lowlands as those farms may have more flexibility to change to a different sector, although this will of course take time. No doubt some uplands farms may downsize their breeding flocks.

Longer term, it may be that upland farmers are better placed to benefit from environmental payments for the delivery of public goods. This may encourage some resilience, although details around such payments are limited at the moment, and are likely to remain so until after Brexit.

Summary

Overall in any rapid response scenario slaughterings pick up quite sharply from the first year. However, which scenario is more likely in reality is difficult to identify. While some farmers may wish to make a rapid exit/ downsize their ability to do this may be limited by the market, processing capacity, or cold storage capacity.

There are two types of capacity. One would be processors' physical ability to slaughter animals with available size of abattoir and labour. The other is the processors' willingness to slaughter them and potentially store the meat in long term cold stores.

Last summer, some beef farmers wanted to send forwards cattle due to the drought, but processors did not have the demand necessary to increase slaughter levels of prime cattle, although they were able to take cull cows. This was reflected in slaughter figures of prime animals which did not really change, while cow slaughterings did pick up, driven by an underlying demand for cow beef. Without an ability to place product, it is difficult to imagine processors' being able to accommodate very large increases in the number of lambs, even if they were not limited by capacity.

Another important risk to this forecast is that there could be a material change in the seasonality of the lamb and sheep kill. It is assumed within this analysis that seasonality is unchanged.

Throughout this analysis it has been assumed that market access to the EU becomes somewhat restricted. It will take time to establish export certificates in order to ship sheep meat into the EU as the UK is currently not an approved third country. It is not yet known when the UK will have third country status, or when those certificates will be in place although preparations for

readiness are well underway.

Under a 'hard' Brexit situation therefore there would be tariffs to pay, for UK exports to enter the EU. Currently EU sheep meat tariffs stands at an ad valorem rate of over 40% which would have an impact on the potential price achieved on export products.

Under this analysis, it has been modelled that all exports to Europe would be displaced. However, assuming the UK had an export certificate, it is reasonable to assume that some, although perhaps only a relatively small number of products might still continue to be exported by the UK into the EU even though they would face tariff barriers. It may be that the UK exporter would have to pay for the entire tariff, and so would receive a lower price. It may be that the value of the tariff could be shared to some extent by the importer, but this would most likely increase the price of the final delivered product, affecting its competitiveness. It is for this reason we would expect UK exports to reduce significantly.

EU tariff rates

Description	Tariff	Effective ad valorem 2015 export unit price	Effective ad valorem 2017 export unit price
Fresh/chilled lamb carcase	12.8% + €171.3/100kg	46%	48%
Fresh/chilled sheep carcase	12.8% + €171.3/100kg	45%	48%
Fresh/chilled sheep legs	12.8% + €220.7/100kg	35%	36%
Frozen lamb carcase	12.8% + €128.8/100kg	38%	58%
Frozen sheep carcase	12.8% + €128.8/100kg	25%	37%
Frozen sheep legs	12.8% + €167.5/100kg	40%	42%