TOXIC TRADE

How trade deals threaten to weaken UK pesticide standards

A report by PAN UK, Sustain and Dr Emily Lydgate **June 2020**

PESTICIDE ACTION NETWORK UK

sustain
the alliance for better food and farming

KEY ACRONYMS

CA	Codex Alimentarius
CAC	Codex Alimentarius Commission
CETA	EU-Canada Comprehensive Economic and Trade Agreement
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DDT	Dichlorodiphenyltrichloroethane
EDC	Endocrine disrupting chemical
EPA	United States Environmental Protection Agency
EU	Japan EPA - EU-Japan Economic Partnership Agreement
FAO	Food and Agriculture Organization of the United Nations
FTA	Free Trade Agreement
FWS	US Fish and Wildlife Service
GMO	Genetically Modified Organism
HHP	Highly Hazardous Pesticides
MRL	Maximum Residue Level
OP	Organophosphates
PPE	Personal Protective Equipment
SPS	Sanitary and Phytosanitary
TTIP	Transatlantic Trade and Investment Partnership
USMCA	United States-Mexico-Canada Agreement
USTR	US Trade Representative
WHO	World Health Organization of the United Nations
WTO	World Trade Organization

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EXECUTIVE SUMMARY*

While far from perfect, UK pesticide standards are some of the strongest in the world in terms of protecting human health and the environment. UK safety limits for the levels of pesticides allowed to appear in food tend to be more stringent than in the majority of other countries outside the EU and, along with its European counterparts, the UK is more likely to ban a pesticide due to concerns over the harms it causes.

As a result of these relatively high standards, future trade deals with non-EU countries with weaker pesticide protections present a considerable risk to the health of UK citizens and the environment. Trade partners attempting to secure access to the UK market for their food exports have listed UK pesticide standards as a key sticking point and made it clear that weakening them is a priority.

What are the risks for UK health, environment and agriculture?

If UK trade negotiators bow to their demands then the increased risk to human health could be significant. American grapes, for example, are allowed to contain 1,000 times the amount of the insecticide propargite than their UK equivalents. Propargite has been linked to cancer and classified as a 'developmental or reproductive toxin', meaning that it can negatively affect sexual function and fertility and can cause miscarriages. An Australian apple can contain 30 times the amount of buprofezin – an insect growth regulator classified as a possible human carcinogen – than a UK apple.

As well as finding themselves exposed to higher levels of pesticides in their diets, UK citizens could soon have no choice but to consume food containing pesticides that are currently banned from appearing in UK food. The US allows the use of almost 1.5 times the number of 'Highly Hazardous Pesticides' (HHPs) - a concept which originates from the United Nations - as the UK, while Australia allows almost double. The insecticide dimethoate is just one example. This Highly Hazardous Pesticide is banned in the UK due to potential human health risks, but allowed to appear in food produced in the US and Australia. Meanwhile, unlike the UK, the US and India continue to allow food to contain residues of the insecticide chlorpyrifos which has been shown to negatively affect the cognitive development of foetuses and young children.

Any weakening of UK pesticide standards via trade deals poses risks not just to human health but also to the environment. Trade partners such as the US and India have a history of challenging the EU's relatively precautionary approach to which pesticides are allowed for use, and the UK is already coming under similar pressure. Australia, the US and India all allow the use of pesticides which the UK prohibits because they are highly toxic to bees and pollinators, including neonicotinoids which are notorious for driving massive declines in bee populations. They also authorise pesticides known to contaminate groundwater and harm aquatic ecosystems, such as the herbicides atrazine and diuron. If the UK Government is to achieve its ambition to "*leave the natural environment in a better state than we found it*" then it must resist efforts by trade partners to push the UK to authorise, or reverse bans on, pesticides which harm wildlife and contaminate water and soil.

These risks also pose an economic threat to the future of UK agriculture. If UK food starts to contain higher levels of more toxic pesticides then British farmers will struggle to meet EU standards, thereby losing their primary export destination which currently accounts for 60% of UK agricultural exports. Equally concerning, British farmers could be undercut by a flood of imported crops grown more cheaply on a larger scale and to lower standards. It's crucial that the Government protects British farming by defending pesticide standards, particularly in trade negotiations with agricultural powerhouses such as the US and Australia.

* References all provided in body of report

What do UK citizens want?

New YouGov polling published alongside this report reveals that the UK public is overwhelmingly opposed to any lowering of UK pesticide standards to meet the demands of other countries' trade negotiators. 71% of respondents are 'concerned' that a trade deal with the US in particular will increase the amount of pesticides in the food they consume, with 43% of people 'very concerned'. The same figure (71%) agree that the UK Government must resist pressure in trade negotiations with the US to overturn bans on pesticides, even if this means the "best" trade deal cannot be reached. Meanwhile, 79% are concerned about impacts to health resulting from a lowering of UK pesticide standards with 77% worried about negative impacts on the environment.[1]

What do the negotiating objectives of trade partners tell us?

The key findings of this report present an alarming picture and a closer look at the negotiating objectives of the UK and its future trade partners provides little reassurance. The US' objectives in particular reveal a wide range of different tactics, all aimed at weakening UK pesticide standards to facilitate US food exports. These include efforts to persuade the UK to adopt weaker standards and abandon the Precautionary Principle – which states that action should be taken to prevent harms to health or environment as long as there are reasonable grounds for concern – as the basis for decision-making on pesticides.

In what would arguably undermine the UK's aim to take back control of its trade policy following EU exit, US trade negotiators are also pushing for conditions which require the UK to consult with the US Government and private sector (including the powerful US agrochemical industry) before introducing any new regulations or bans, including

The Precautionary Principle vs. the 'science-based' approach

The Precautionary Principle, which emerged in the 1970s, theoretically underpins all current UK decison-making on pesticides. It allows regulators to adopt precautionary measures when scientific evidence about an environmental or human health hazard is uncertain and the stakes are high. For example, when evidence began to emerge that neonicotinoids were driving alarming declines in bee populations the UK Government was able to support a ban on their use on the basis that here was sufficient cause for concern. They did not have to wait for the evidence to be definitive, an often unattainable goal.

In contrast, many of the UK's potential trade partners follow what is misleadingly termed 'the science-based approach'. Under this approach, instead of a pesticide manufacturer having to demonstrate that their product is safe, regulators must offer a very high level of scientific proof that a product is dangerous. However, evidence of harms may not emerge for many years and, in the meantime, some of the negative impacts caused – such as the development of malignant tumours or the extinction of particular species – may be irreversible.

The US Government in particular uses the term 'science-based' as a veiled and publicly palatable way through which to attack the Precautionary Principle. It's vital that UK negotiators understand the true meaning of 'science-based 'and are prepared to defend the vital role that the Precautionary Principle plays in protecting human health and environment from pesticides.

those designed to better protect health or environment. Another of the US' stated objectives, if accepted, would prevent the UK from requiring other trade partners to raise their own pesticide standards in case this has a knock-on effect on US exports.

While the US is clear about what it hopes to achieve in a trade agreement, looking to the UK Government's negotiating objectives reveals a more confusing picture. The UK objectives for a deal with the US include vague, but welcome, statements committing to maintain "…our high environmental protection, animal welfare and food standards". However, the objectives for the future relationship with the EU strike a very different tone and include some major red flags, suggesting that the UK Government is planning to diverge considerably from its current precautionary approach. Meanwhile, the EU has been clear from the beginning that it will not allow imports of agricultural produce from the UK unless they meet its standards, including on pesticides. At some point, the UK Government is going to have to make a fundamental choice – does it want to maintain current levels of pesticide protections or bow to the US Government in trade negotiations? If the UK chooses the latter then conceding to similar demands in negotiations with other trade partners will be more likely, because the UK will have already set a precedent by watering down its domestic standards.

In terms of other trade partners, the UK-India Joint Working Group on Trade is yet to publish negotiating objectives and a deal appears to remain some way off. Similarly, despite talk of a UK-Australia deal being imminent, neither side has published detailed negotiating objectives. The very limited information that is currently available from the Australian Government talks about "… removing barriers to trade in goods" which can be jargon for lowering standards, but it provides no further detail and makes no mention of consumer protection or environmental or human health standards. However, Australia is Party to the Comprehensive and Progressive Trans-Pacific Partnership which follows the US' approach to regulating pesticides, so could try to replicate this in a UK deal.

Hazard-based vs. risk- based approaches

The UK – along with the EU – currently follows what is commonly called the 'hazard-based' approach to pesticide regulation (but is more accurately termed as a Generic Risk-Based approach). This means that if an active substance is judged to be intrinsically dangerous – for instance by being able to cause cancer or persistent pollution – then it is too hazardous to be used safely and should be banned. This approach is highly effective at reducing pesticide-related harms and is relatively simple to operate, but can be criticised for reducing the range of pesticides available to farmers.

Other countries, like the US and Australia, follow the so-called 'risk-based' approach (or Specific Risk-Based approach). This model places greater emphasis on assessing and managing risks and involves the deployment of specific checks and measures to keep risks below acceptable levels. For example, if a pesticide is particularly harmful to human health, under a hazard-based approach it might be banned while a risk-based approach would introduce measures such as Personal Protective Equipment (PPE) for users or instructions not to spray near residential areas. Ensuring a high level of protection under a risk-based approach requires the implementation and enforcement of multiple processes and systems to ensure that the controls are adopted and working. This adds complexity and cost and if any of these systems break down, the potential impacts on human health and the environment are high.

How does the current UK approach to pesticides differ from that of future trade partners?

There are a range of differences between the way the UK has chosen to govern pesticides and that of future trade partners. Arguably the most fundamental is that the UK currently takes an approach based on the view that some pesticides are intrinsically hazardous and therefore simply too dangerous to be in use. In contrast, non-EU countries follow an approach based on the belief that almost every risk can be mitigated. There are many examples of countries attempting to use the guise of 'regulatory cooperation' in trade negotiations to attack what is commonly known as the EU's 'hazard-based approach'. Whether the UK will be able to continue to withstand these attacks as it did previously as an EU member remains to be seen.

The divergence in the approaches of different trade partners also relate to numerous procedural aspects of the pesticide regime. For example, the US allows 'conditional registration' which means that pesticides which haven't been through a full risk assessment are allowed to be used. At one point in 2012, more than 65% of pesticides authorised for use were conditionally registered. Meanwhile, Australia and India have no set time period for reviewing pesticide approvals, meaning that harmful pesticides can remain in use indefinitely once authorised. In contrast, under the current UK system, pesticides are granted a maximum license of 15 years before having to go through a risk assessment process to be reapproved. It is crucial that UK trade negotiators understand these differences so they are able to defend aspects of the UK pesticide regime designed to protect human health and environment.

How vulnerable is the UK to the demands of trade partners?

There has been much public uproar about the UK lowering its food standards via a trade deal with the US to accept 'chlorinated-chicken'. However, the risks related to pesticides are equally significant and concerning. We know that weakening UK pesticide standards is a key priority for many potential trade partners and the UK may be particularly vulnerable due to political pressure to conclude trade agreements in order to recoup lost EU market access. In addition, the process of bringing EU pesticide regulations over into UK law has handed UK Ministers significant discretionary powers to water down standards in order to meet trade partners' demands. Meanwhile, there is currently almost no opportunity for parliamentary or public scrutiny of trade agreements, making it much more likely that countries with lower pesticide standards will be able to force down UK pesticide protections.

The UK Government's 25 Year Environment Plan states that "*We must protect people and the environment from the risks that pesticides can pose*". There is no doubt that, at this present time, trade deals pose the greatest threat to UK pesticide standards. It's crucial that the UK Government remains strong in the face of pressure from trade partners and chooses to stand up for British consumers, farmers and wildlife by protecting our hard-won pesticide protections.

Key recommendations for the UK Government *

- Do not allow any weakening of UK pesticide standards via post-Brexit trade agreements. This must include:
  - » Ensuring that no currently banned pesticides are allowed for use in the UK
  - » Ensure that food containing detectable residues of currently banned substances cannot be imported into the UK
  - » Ensure that Maximum Residue Levels are maintained or reduced.
- Ensure a level-playing field for UK farmers by maintaining existing UK pesticide standards, thereby enabling them to continue exporting to the EU.
- Prevent UK farmers from being disadvantaged by cheap food imports produced to weaker pesticide standards in non-EU countries.
- Maintain the Precautionary Principle as the basis upon which all pesticide-related decisions are made and strengthen its implementation. This includes maintaining the so called 'hazard-based' approach to pesticide authorisations.
- Preserve the power for the UK to exercise its right to go above and beyond the status quo and applicable international standards to continually strive for higher levels of consumer and environmental protection.
- Introduce additional legislative protections to ensure that any change to food safety standards or environmental protections subsumed in trade agreements can only be introduced via primary legislation.
- Ensure that trade agreements are developed in the open with the opportunity for full democratic scrutiny.

Please note: specific language for use in developing FTAs so that pesticide standards are maintained is listed in the Annex on page 42.

* See page 41 for full recommendations

INTRODUCTION – SETTING THE SCENE

EU exit will see the UK negotiate its own Free Trade Agreements (FTAs) for the first time in four decades. The broad aim of these agreements will be to enable as frictionless trade as possible and they will inevitably involve elements of regulatory cooperation, whereby joint standards are agreed between trading partners which will then apply to all goods traded between them. Agricultural products tend to be a key focus in FTAs and therefore aligning differences in food standards, including on pesticides, will be an important topic in most, if not all, UK trade negotiations.

These negotiations are taking place against a backdrop of rising global concern over pesticides. Recent reports have revealed that one million species are at risk of extinction[2] and a third of insects are now endangered[3], with pesticides identified as one of the key drivers. Meanwhile, the body of evidence linking pesticides to serious diseases such as cancer and Parkinson's is increasing. Public opposition to pesticides is growing and UK consumers, in particular, are increasingly worried about pesticide residues in their food.[4]

While still suffering from many deficiencies, the EU has the strongest pesticide regime in the world in terms of protecting human health and the environment. As a Member State, the UK played a role in formulating these standards and has benefitted from the relatively high protections they provide. As a result, future UK trade agreements could potentially pose major threats to UK pesticide standards since all of the non-EU countries prioritised for post-Brexit trade have significantly weaker pesticide standards than the UK currently enjoys. Crucially, this applies both to which particular pesticides are authorised for use and what amount of a chemical is permissible to appear in food as a residue.

However, beyond these more tangible aspects, there is also massive divergence in the core approaches taken to regulating pesticides. The EU follows what is known as the 'hazard-based' approach which asserts that some pesticides are simply too dangerous to be in use and should therefore be banned. It also, in principle at least, bases decisions on the Precautionary Principle which states that "*When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause-and-effect relationships are not fully established scientifically*."[5] In contrast, the majority of non-EU countries follow an approach based on the belief that most risks can be mitigated (see page 7 for more detail on hazard vs. risk).

There are many examples of countries attempting to use the guise of 'regulatory cooperation' in trade negotiations to attack the Precautionary Principle and fundamentally alter the way the EU governs pesticides. One of the key tactics used by both governments and pro-pesticide lobby groups is to classify higher standards as 'non-tariff trade barriers' or 'trade irritants', and to try to eliminate them by proposing aligning standards down to those least protective of human health and the environment.

The UK will almost certainly come under this pressure. In fact, we know that lowering UK pesticide standards is a key priority of some future trading partners, notably the US. Documents from the UK-US Trade and Investment Working Group (a precursor to official negotiations) leaked in November 2019 show the US complaining about the EU approach to pesticide regulation and pushing for the UK to abandon it.[6] In addition to coming under fire from other governments, the UK is also facing pressure from the agrochemical industry and powerful, pro-free trade organisations pushing a deregulation agenda. Domestically, while the National Farmers' Union (NFU) is vehement that trade deals shouldn't undermine the majority of UK farming standards, they continue to push for a weakening of pesticide regulations[7], despite the potential impact on British farmers who would struggle to export their produce to EU Member States (which currently account for 60% of the UK agriculture export market[8]). Moving away from alignment with the EU could have a profoundly negative effect on UK farmers who may have to find

new export destinations for their produce while facing additional competition from imported crops grown to lower standards.

Other potential impacts of a drop in UK pesticide standards include:

- A weakening of laws on the use of carcinogens and other substances of high toxicological concern; allowing the import of food with higher residue levels;
- Reducing requirements for authorising active substances;
- Slowing or stopping efforts to regulate endocrine (hormone) disrupting chemicals;
- Blocking access to information that is vital to developing non-toxic alternatives to pesticides.[9]

Wider related policies not covered in this report – such as agri-environment schemes which support farmers to reduce pesticide – may also come under threat. They could be targeted directly based on arguments that they distort trade. They could also be undermined indirectly as their higher standards of production render UK farmers unable to compete with cheap food imports produced in countries where farmers are able to use more harmful pesticides.

These threats are all the more concerning given that the rules governing trade in the UK offer no meaningful role for parliamentarians or opportunities for public scrutiny. Currently, no one outside the UK Government can even access the text of an FTA until it is being ratified, let alone amend it. The current lack of transparency makes it much more likely that countries with lower pesticide standards will be able to force down UK pesticide protections. In addition, there is a question around whether the UK Government, which hasn't negotiated an FTA since the 1970s, has the capacity or expertise to withstand attempts to lower pesticide standards, especially given the political pressure to conclude agreements quickly. In March 2020, it was reported that the UK Department for International Trade needed to fill job vacancies for 135 trade experts.[10] With the perfect storm of inexperienced UK trade negotiators, staff shortages, more powerful and well-resourced negotiating partners and a shroud of secrecy enclosing the entire process, trade deals are arguably the most likely route through which the UK's pesticide standards will be undermined.

There has been much public uproar about 'chlorinated-chicken' and 'hormone-fed beef' coming into the UK as a result of a trade agreements with the US and, in response, we have had verbal commitments from the UK Government that food standards won't be dropped (although such promises are in no way sufficient to stop UK meat and animal welfare standards being put on the table during trade negotiations). However, we have had no such government statements on pesticides, despite the risks being equally significant and concerning. If the UK Government is serious about its promise not to lower food standards as part of future trading agreements, then it must commit to maintaining current UK pesticide standards as well as the ability to strengthen future standards as needed. Otherwise, UK citizens and wildlife will be exposed to more harmful chemicals in higher levels and ultimately it is our health and environment that will pay the price.

71% of people are concerned that a trade deal with the USA will increase the amount of pesticides in the food they consume.
43% of people are very concerned.

YouGov polling, 30th April - 1st May 2020

This report focuses on how future FTAs threaten to weaken UK pesticide standards and ways in which this could increase pesticide-related harms to UK citizens, wildlife and the natural environment. It compares current UK pesticide protections with that of two countries slated as major priorities for post-Brexit Free Trade Agreements – US and Australia – and a third country, India. In addition to being targets of the UK Government for immediate or future trade deals, these countries have been chosen because they are major agricultural producers and their significant lobbying strength increases the likelihood that they will be able to force down UK pesticide standards during trade negotiations.

The report explores issues around pesticides contained in food imported into the UK and compares the amounts of residues permissible under the UK's current system with that of other countries. It then compares the number and type of active substances approved for use in the UK with the three focus countries listed above, with an emphasis on pesticides which are particularly hazardous to human health and the environment. After presenting its key findings, the report delves into existing FTAs and the stated negotiating objectives of the UK and its potential trading partners in order to identify where the greatest risks to UK pesticide standards lie. Finally, it compares the UK's current approach to regulating pesticides to those of the three focus countries and, where information is available, provides a brief overview of the extent of pesticide-related harms to both their citizens' health and the environment.


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KEY FINDINGS – THE DATA

Pesticides and food

Arguably the most concerning aspect of any weakening of pesticides standards via trade deals is the impact on imported food. Food on UK shelves may soon be allowed to contain larger amounts of approved pesticides, as well as residues of pesticides currently banned in the UK.

Key finding 1: Amount of pesticides in food imported into UK could increase

For approved pesticides, the EU (like almost all other countries) sets what's known as Maximum Residue Levels (MRLs) crop-by-crop. The following section provides a comparison of MRLs set by the three focus countries' for specific pesticides that pose a high risk to human health, operator health or the environment (and are therefore designated as 'Highly Hazardous Pesticides')[11]. By comparing MRLs we are able to see where potential threats to consumer protection and human health are likely to emerge in the UK. The food items have been selected because they are either already key UK imports or there is a likelihood that imports could increase under future trade deals.

It should be noted that there are some cases where EU MRLs are higher than those of other countries or international standards. However, in general, the EU does take a more precautionary approach and the MRLs it sets therefore tend to be lower than elsewhere in the world.

The MRL figures have been taken from the following official government databases for the EU plus the three focus countries; EU Pesticides Database[12], USDA MRL Database,[13] India Environment Portal[14] and the Australian Federal Register of Legislation MRL list[15]. Since the UK is likely to be pressured in trade negotiations to revert to minimum international standards for MRLs (which come from the Codex Alimentarius[16], a set of food standards under the UN's Food and Agriculture Organization and World Health Organization), these figures have also been included. (See page 19 for more detail on the Codex Alimentarius)

Health issues related to pesticides – an explainer

The report lists the health issues associated to specific pesticide active substances. It is important to note that if a substance is classified as a 'Known Carcinogen' (for example) it does not mean that exposure to it will definitely result in the development of cancer. The classification simply means that in tests for toxicity the substance can cause a particular effect.

Here is a guide to the specific health issue classifications listed in the report:

- Carcinogens are capable of causing different types of cancer, including Leukaemia and Non-Hodgkin's Lymphoma.
- Endocrine disruptors (EDCs) interfere with hormone systems and can cause birth defects, developmental disorders and reproductive problems such as infertility.
- Developmental or reproductive toxins have adverse effects on sexual function and fertility in both adults and children, and can reduce the number and functionality of sperm and cause miscarriages
- Cholinesterase Inhibitors reduce the ability of nerve cells to pass information to each other and can impair the respiratory system and cause confusion, headaches and weakness.

Apples

Whilst the UK is a producer of apples, domestic supply is insufficient to meet demand resulting in the UK being a net importer. In 2016 the UK imported 381,591 tonnes of apples, 61% of which came from EU Member States. The rest were made up of imports from countries outside the EU, notably New Zealand and South Africa. However, the UK also imports a limited amount of apples from the US.

The US is a huge producer of apples and currently their main export destinations are Latin America and Asia. However, there is a possibility that a trade deal could result in an increase in UK imports of US apples, particularly if current EU tariff barriers are removed. At present the UK does not import apples from Australia. However, Australia is a significant apple producer and in a trade deal apple exports to the UK to fill the seasonal gap might be part of the package.

Table 1: Examples of Maximum Residue Levels set for Highly Hazardous Pesticides used on apples

Pesticide (active substance)	UK/EU	US		Australia		International Standard *		Health issues (see guide on page 15)
	mg/kg	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	
Buprofezin (Insect Growth Regulator)	**0.01**	3	x300	3	x300	3	x300	• Possible Human Carcinogen
Ethephon (Plant Growth Regulator)	**0.8**	5	x6.25	1	x1.25	0.8	Equal	• Cholinesterase Inhibitor
Etofenprox (Insecticide)	**0.7**	5	x7.1	N/A	N/A	0.6	x0.86	• Known Human Carcinogen • Suspected Endocrine Disruptor
Folpet (Fungicide)	**0.3**	5	x16.6	N/A	N/A	10	x33	• Known Human Carcinogen
Malathion (Insecticide)	**0.02**	8	x400	2**	x100	0.5	x25	• Known Human Carcinogen • Cholinesterase Inhibitor • Suspected Endocrine Disruptor

* Codex Alimentarius

** Malathion is known as Madison in Australia

Grapes

At present, the UK imports most of its grapes in season from EU Member States and out of season from South Africa and a small selection of other locations. Both the US and India are significant grape producers and the US, in particular California, has long had an eye on increasing its exports to the UK.[17] Under new trading arrangements with changes in tariffs and other factors both of these countries could step in to replace some of the current imports from the EU.

Table 2: Examples of Maximum Residue Levels set for Highly Hazardous Pesticides used on grapes

Pesticide (active substance)	UK/EU	US		India[18]		International Standard *		Health issues (see guide on page 15)
	mg/kg	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	
Abamectin (Insecticide)	**0.01**	0.02	x2	0.05	x5	0.03	x3	• Developmental or Reproductive Toxin • Suspected Endocrine Disruptor
Malathion (Insecticide)	**0.02**	8	x400	4	x200	5	x250	• Known Human Carcinogen • Cholinesterase Inhibitor • Suspected Endocrine Disruptor
Permethrin (Insecticide)	**0.05**	N/A	N/A	N/A	N/A	2	x40	• Known Human Carcinogen • Suspected Endocrine Disruptor
Phosmet (Insecticide)	**0.05**	10	x200	N/A	N/A	10	x200	• Possible Human Carcinogen • Cholinesterase Inhibitor
Propargite (Insecticide)	**0.01**	10	x1000	N/A	N/A	7	x700	• Known Human Carcinogen • Developmental or Reproductive Toxin

* Codex Alimentarius

Wheat

The UK both imports and exports large quantities of wheat. UK wheat is, for the most part, lower in gluten and therefore less useful for end uses such as bread. The bulk of UK wheat imports are of higher gluten types, much of which currently comes from Canada.

However, the UK also imports wheat from elsewhere including the US and Australia. Both countries are major wheat producers and could see a UK trade deal as a key opportunity to increase exports, particularly if more favourable tariff regimes are imposed with bilateral trade arrangements. India, the world's second biggest producer of wheat, could also expect to see an increase in sales to the UK under a more favourable trade agreement.

Table 3: Examples of Maximum Residue Levels set for Highly Hazardous Pesticides used on wheat

Pesticide (active substance)	UK/ EU	US		Australia		India[19]		International Standard *		Health issues (see guide on page 15)
	mg/kg	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	
Acetochlor (Herbicide)	**0.01**	0.02	x2	N/A	N/A	N/A	N/A	0.02	x2	• Known Human Carcinogen • Suspected Endocrine Disruptor
Carbaryl (Insecticide)	**0.5**	1	x2	5	x10	2	x4	2	x4	• Known Human Carcinogen • Cholinesterase Inhibitor • Developmental or Reproductive Toxin • Suspected Endocrine Disruptor
Imazalil (Fungicide)	**0.01**	0.1	x10	0.05	x5	N/A	N/A	0.01	Equal	• Known Human Carcinogen • Developmental or Reproductive Toxin

* Codex Alimentarius

Sweetcorn

In season, the UK produces sweetcorn for its own consumption bolstered by imports from the EU, notably Hungary. Out of season, the UK imports from a range of countries including the US, India and Australia. In addition to potentially leading to less stringent MRLs, a trade deal with the US in particular risks allowing imports of previously banned GM varieties of corn.

Table 4: Examples of Maximum Residue Levels set for Highly Hazardous Pesticide used on sweetcorn

Pesticide (active substance)	UK/ EU	US		Australia		International Standard *		Health issues (see guide on page 15)
	mg/kg	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	mg/kg	vs. UK/EU	
Acetochlor (Herbicide)	**0.01**	0.05	x5	N/A	N/A	0.04	x4	Known Human Carcinogen Suspected Endocrine Disruptor
Imazalil (Fungicide)	**0.01**	N/A	N/A	0.05	x5	N/A	N/A	Known Human Carcinogen Developmental or Reproductive Toxin
Malathion (Insecticide)	**0.02**	2	x100	N/A	N/A	0.02	Equal	Known Human Carcinogen Cholinesterase Inhibitor Suspected Endocrine Disruptor

* Codex Alimentarius

Soya beans

The recent trade spat between the US and China has meant that the US is looking for alternative markets for its soya as exports to China have dropped dramatically. Currently the UK imports soya from the US and Latin America both for human consumption and animal feed. It is not inconceivable that increased US soya imports could be a feature of a UK/US trade deal.

Table 5: Examples of Maximum Residue Levels set for Highly Hazardous Pesticides used on soya beans

Pesticide (active substance)	UK/EU	US		Health issues (see guide on page 15)
	mg/kg	mg/kg	vs. UK/EU	
Myclobutanil (Fungicide)	**0.05**	0.25	x5	Developmental or Reproductive Toxin Suspected Endocrine Disruptor
Carbaryl (Insecticide)	**0.05**	0.5	x10	Known Human Carcinogen Cholinesterase Inhibitor Developmental or Reproductive Toxin Suspected Endocrine Disruptor
Tetraconazole (Fungicide)	**0.02**	0.15	x7.5	Known Human Carcinogen

Note: Codex Alimentarius has not set MRLs for soya beans so there is no data available.

Codex Alimentarius - keeping global pesticide standards weak

The Codex Alimentarius (CA) is a collection of internationally adopted food standards – referred to as "Codex Standards" – which sit under the UN's Food and Agriculture Organization (FAO) and World Health Organization (WHO). It is the product of the Codex Alimentarius Commission (CAC) which was established by the FAO in 1961 and currently counts 88 national governments plus the EU as its members.[20]

The official purpose of the CA is to protect consumers' health and facilitate the international trade in food, which now totals roughly $2 trillion per year. Its key role in relation to pesticides is setting limits for how much of a particular active substance is allowed to be contained in food (known as Maximum Residue Levels or Limits).[21]

Codex Standards are voluntary in nature and must be translated into national legislation or regulations in order to be enforceable.[22] However since the 1990s, when a reference to Codex Standards was included in the World Trade Organization's (WTO) Agreement on Sanitary and Phytosanitary measures (SPS Agreement), the CA has been given greater political weight. In fact, Codex Standards have become virtually binding for WTO members, regardless of whether they have been integrated into national law.[23]

In practice, this means that a national standard that provides a greater level of protection than Codex is deemed to be a "trade barrier" unless the government in question can demonstrate either that the Codex instrument provides insufficient protection or provide other valid scientific justification.[24] In other words, WTO members wishing to introduce higher MRLs than those set by Codex must justify their decision, beyond simply wanting to take a more precautionary approach to protecting the health of their citizens.

In addition to setting this type of 'regulatory ceiling' discouraging countries from setting higher standards, Codex is also ineffective at setting minimum standards below which national regulations mustn't fall. If, for example, a Codex MRL on a particular commodity is exceeded, governments must simply decide whether to restrict national distribution of the commodity in question or establish specific conditions of sale.[25]

As food standards have evolved and diverged around the world, the two official purposes of the CA (to protect consumers' health and facilitate the international trade in food) have increasingly come into conflict with one another. For more than thirty years, the CAC has viewed the harmonisation of national food standards as a basic goal[26] but, instead of raising standards to the highest possible level of protection, it has consistently sought to lower progressive environmental, health and food safety legislation. As a result, Codex is widely criticised for prioritising free trade over concerns around consumer health and for ignoring the Precautionary Principle in decision-making[27]. The CAC is also criticised for taking decisions behind closed doors with few opportunities for public scrutiny, making it too easy for the agrochemical industry and governments such as the US to influence outcomes.[28]

The result of this opaque and biased approach is clear to see. As shown in this report, Codex has a history of setting weaker safety standards than EU counterparts, including on pesticide MRLs. Given how weak they are, Codex standards are used in trade negotiations as a way to drive down domestic standards. For example, lobbying by the agrochemical industry on the Transatlantic Trade and Investment Partnership (TTIP) - the draft EU-US trade deal which was never signed - revealed attempts to force the EU to accept Codex standards, despite assurances from governments that TTIP wouldn't change laws regarding toxic chemicals or lower standards of protection. In fact, a leaked draft of TTIP's SPS chapter indicated that the deal would require both parties to adopt Codex standards within 12 months, in alignment with the pesticide industry's recommendations.[29]

As can be seen in the tables on pages 16 to 18 on UK food imports, the UK has enjoyed relatively high levels of consumer protection as an EU member and the adoption of Codex pesticide standards would most likely to lead to toxic chemicals appearing in larger quantities in imported food. This would allow other countries to export produce to the UK which wouldn't be permitted in EU markets and therefore risks increasing the exposure of UK consumers to potentially harmful chemicals. It will be impossible to avoid since food labels do not list which pesticide residues the produce contains. In order to protect consumers, it is therefore crucial that the UK Government resists any attempt by trade partners to push the UK to revert to weak Codex Standards on pesticide residues.

Key finding 2: Type of pesticides in food imported into UK could become more toxic

Under the current UK system, imported produce cannot contain detectable residue levels of any active substance that is not approved for use within the EU. As a result, when the EU bans an active substance due to its health or environmental impacts it has a huge impact globally. Farmers and traders across the world wishing to continue exporting to the EU must adapt to ensure that no residues of that specific active substance appear in their produce. It is therefore not surprising that trade negotiators and the pesticide industry spare no efforts in attempting to overturn EU bans, particularly when they come from agricultural powerhouses such as Australia and the US.

In fact, there have been recent attempts to overturn this approach all together. It has been reported that pesticides companies and trade partners such as the US and Canada are pressuring the EU to allow residues of pesticides - which are banned for use in the EU - to appear in food imports. The previous European Commission bowed to these demands but Member States have not yet endorsed the decision and it remains to be seen what the new Commission will do.[30] For now the restrictions remain in place so that food imported into the EU cannot contain detectable residues of unauthorised pesticides.

The following section provides examples of pesticides that are currently prohibited from appearing in UK food imports but are permitted by potential future trade partners.

Table 6: Examples of Highly Hazardous Pesticides currently not permitted to appear as residues in food imported into the UK

Pesticide (active substance)	Crop	EU status	US	Australia	India[31]	International Standard*	Health issues (see guide on page 15)
			mg/kg	mg/kg	mg/kg	mg/kg	
Chlopyrifos (Insecticide)	Apples	Banned	0.01	N/A	0.5	1	• Cholinesterase Inhibitor • Developmental or Reproductive Toxin • Suspected Endocrine Disruptor
Dimethoate (Insecticide)	Wheat	Banned	0.04	0.5	N/A	0.05	• Possible Human Carcinogen • Cholinesterase Inhibitor • Developmental or Reproductive Toxin • Suspected Endocrine Disruptor
Iprodione (Fungicide)	Grapes	Banned	60	N/A	0.1	10	• Known Human Carcinogen • Suspected Endocrine Disruptor
Propiconazole (Fungicide)	Sweetcorn	Banned	0.1	0.05	N/A	0.05	• Possible Human Carcinogen • Developmental or Reproductive Toxin • Suspected Endocrine Disruptor
Simazine (Herbicide)	Oranges	Banned	0.25	N/A	N/A	N/A	• Possible Human Carcinogen • Developmental or Reproductive Toxin • Possible Endocrine Disruptor • Persistent in water • Harmful to aquatic ecosystems
Dichlorvos (Insecticide)	Almond	Banned	2	2	N/A	N/A	• Human Carcinogen, Cholinesterase Inhibitor • Suspected Endocrine Disruptor
Triademefon (Fungicide)	Mango	Banned	N/A	N/A	0.03	N/A	• Possible Human Carcinogen • Developmental or Reproductive Toxin • Suspected Endocrine Disruptor

* Codex Alimentarius

Pesticide approvals

Key finding 3: More toxic pesticides could be approved for use in UK

The EU takes a far more precautionary approach to which active substances it decides to approve than the US, Australia or India. When the EU bans or chooses not to approve a particular active substance the result is that it can no longer be used in Member States.

Currently, UK citizens and the environment gain protection through the EU's precautionary approach to approvals. However, weakening this approach to allow more toxic substances appears to be a key priority of future trade partners, including the US[32] and India[33].

The following section highlights some of the potential dangers of moving away from the UK's current approach by comparing the active substances (and to a lesser extent pesticide products) that are currently permitted for use in the EU with those of other countries.

Table 7: Pesticide approvals in different countries

The table below shows the number of active substances and pesticide products authorised in each country or jurisdiction.

	UK/EU[34,35]	Australia[36]	India[37]	US[38]
Number of approved active substances	468*	486	318	692
Number of approved pesticide products	2900*	8000	563	9000

*Under the EU system, pesticides are authorised for use in two stages - the European Commission authorises active substances (e.g. Glyphosate) while Members States (including the UK) authorises pesticide products (e.g. Roundup).

While there is a clear discrepancy between the numbers of active substances approved in different areas, this in itself is not a clear cut indicator of risk to human health or the environment. Within these active substances are a range of different chemicals from benign bio-pesticides such as soap to the lethal herbicide paraquat (banned in the EU since 2007).

A more revealing look at the figures is to compare the numbers of approved active substances that are classified as Highly Hazardous Pesticides (HHPs). The concept of HHPs originated from the UN's Food and Agriculture Organization (FAO) and World Health Organization (WHO) which were motivated by continuing problems of poisoning incidents and pesticide-related ill-health and environmental harm, especially in countries with weak regulations.[39] PAN International's List of Highly Hazardous Pesticides includes pesticides classified by internationally recognised authorities under four types of hazard:

- Acutely toxic to humans via swallowing, skin contact or inhalation.
- Long-term human health hazards related to cancer, birth defects and reproductive harm, disruption of hormone systems or damage to genetic material.
- Environmental hazards (persistent in soil or water; ability to accumulate in the food chain; highly toxic to bees; toxic to aquatic organisms).
- Recognised as causing serious or irreversible harm under actual conditions of use in a particular country.[40]

Table 8: Approvals of active substances classified as Highly Hazardous Pesticides (HHPs)[41]

	UK/EU	Australia	India	US
Number of approved Highly Hazardous Pesticides	73	144	91	102

Active substances of particular concern

As a result of the EU's precautionary approach to approvals, many active substances that remain in use in other countries are not authorised in Member States due to the threat they pose to environment and human health. For the purposes of this report, they can be broadly grouped into three categories – toxic to bees and pollinators, water contaminants and presenting a threat to human health.

i) Toxic to bees and pollinators

In 2019, the EU banned the use of fipronil and three neonicotinoids due to the unacceptable level of risk to bees and pollinators that their use posed. A fourth neonicotinoid, thiacloprid, was also withdrawn from use in 2019 due to its potential impact on both human health and the environment. However, these active substances are almost all approved for use in the countries with which the UK is hoping to increase trade.

Table 9: Approval status of active substances that are highly toxic to bees and other pollinators

	EU	Australia	India	US
Clothianidin (neonicotinoid)	×	✓	✓	✓
Dinotefuran (neonicotinoid)	×	×	✓	✓
Imidacloprid (neonicotinoid)	×	✓	✓	✓
Nitenpyram (neonicotinoid)	×	✓	×	×
Thiacloprid (neonicotinoid)	×	✓	✓	✓
Thiamethoxam (neonicotinoid)	×	✓	✓	✓
Fipronil	×	✓	✓	✓

KEY: × = not approved; ✓= approved

ii) Water contaminants

The persistence of pesticides in water and the risk they pose to both aquatic eco-systems and human health, including links to cancer, has led to various active substances being withdrawn from use by the EU. However, many of them remain in use in other countries.

Table 10: Approval status of active substances that contaminate water and/or impact on aquatic life

	EU	Australia	India	US	Impacts
Alachlor (Herbicide)	×	×	✓	✓	• Groundwater contaminant • Known Human Carcinogen
Atrazine (Herbicide)	×	✓	✓	✓	• Persistent in water • Harmful to aquatic ecosystems • Suspected Endocrine Disruptor
Diuron (Herbicide)	×	✓	✓	✓	• Persistent in water • Acute toxicity to aquatic species
Isoproturon (Herbicide)	×	×	✓	×	• Persistent in water • Harmful to aquatic ecosystems
Simazine (Herbicide)	×	✓	×	✓	• Persistent in water • Harmful to aquatic ecosystems • Possible carcinogen • Suspected Endocrine Disruptor

KEY: × = not approved; ✓= approved

iii) Hazardous to human health

While far from perfect, the EU system is more precautionary than its counterparts in other countries in terms of removing active substances that pose an intrinsic hazard to human health. Over the last decade, following scientific assessments by the European Food Safety Authority (EFSA), many active substances that are considered carcinogenic, reproductive toxins or neurotoxic have been removed from the EU market. However, they continue to be used in most other countries, including in many of the UK's potential trading partners. Unfortunately, the EU continues to permit the use of endocrine disruptors. For more detail on the health issues listed below see page 15.

A group of pesticides known as 'organophosphates' (OPs) are known to be particularly toxic to humans. The dangers of being exposed to high levels of OPs are well-established. Acute toxic reactions can include blurred vision, dizziness, headaches, tremors, respiratory and cardiac problems and death. Evidence of the harm caused by exposure to low levels of these insecticides over time is also mounting, particularly in terms of negative impacts on children's cognitive development. As a result, the EU has removed the majority of OPs from use, in stark contrast to other countries (see table 12).

Table 11: Approval status of active substances that have high potential to harm human health

	EU	Australia	India	US	Health issues (see guide on page 15)
Acephate (Insecticide)	×	✓	✓	✓	Possible Human Carcinogen Cholinesterase Inhibitor Suspected Endocrine Disruptor
Chlopyrifos (Insecticide)	×	✓	✓	✓	Cholinesterase Inhibitor Developmental or Reproductive Toxin Suspected Endocrine Disruptor
Dimethoate (Insecticide)	×	✓	✓	✓	Possible Human Carcinogen Cholinesterase Inhibitor Developmental or Reproductive Toxin Suspected Endocrine Disruptor
Methiocarb (Insecticide)	×	✓	×	✓	Cholinesterase Inhibitor
Methyl Bromide (Fumigant, Insecticide)	×	×	✓	✓	Developmental or Reproductive Toxin Suspected Endocrine Disruptor
Paraquat (Herbicide)	×	✓	✓	✓	Highly Acutely Toxic Suspected Endocrine Disruptor
Permethrin (Insecticide)	×	✓	✓	✓	Known Human Carcinogen Suspected Endocrine Disruptor
Profenofos (Insecticide)	×	✓	✓	✓	Cholinesterase Inhibitor

KEY: × = not approved; ✓= approved

Table 12: Approval status of organophosphates

	UK/EU	Australia	US	India
Total number of organophosphates authorised for use	**4**	**33**	**26**	**16**
Active substance (all classified as an organophosphate)	**UK/EU**	**Australia**	**US**	**India**
Acephate	×	✓	✓	✓
Azamethiphos	×	✓	×	×
Azinphos-methyl	×	✓	✓	×
Cadusafos	×	✓	✓	×
Carbofuran	×	×	×	✓
Chlorfenvinphos	×	✓	×	×
Chlorpyrifos	×	✓	✓	✓
Chlorpyrifos-methyl	×	✓	✓	✓
Coumaphos	×	✓	✓	×
Cythioate	×	✓	×	×
Diazinon	×	✓	✓	×
Dichlorvos	×	✓	×	✓
Dimethoate	×	✓	✓	✓
Disulfoton	×	×	✓	×
Ethion	×	✓	✓	✓
Fenamiphos	✓	✓	✓	×
Fenitrothion	×	✓	✓	✓
Fenthion	×	×	×	×
Maldison (Malathion)	✓	✓	✓	✓
Methamidophos	×	×	×	×
Methidathion	×	✓	✓	×
Mevinphos	×	✓	✓	×
Naled	×	✓	✓	×
Naphthalophos	×	✓	×	×
Omethoate	×	✓	×	×
Oxydemeton-methyl	×	✓	✓	✓
Parathion	×	×	×	×
Parathion-methyl	×	×	×	×
Phorate	×	✓	✓	✓
Phosmet	✓	✓	✓	×
Pirimiphos-methyl	✓	✓	✓	✓
Profenofos	×	✓	✓	✓
Propetamphos	×	✓	✓	✓
Prothiofos	×	✓	×	×
Temephos	×	✓	✓	✓
Terbufos	×	✓	✓	×
Tetrachlorvinphos	×	✓	✓	×
Thiometon	×	✓	×	×
Trichlorfon	×	✓	✓	✓

KEY: × = not approved; ✓= approved

EXISTING FREE TRADE AGREEMENTS AND CURRENT NEGOTIATING OBJECTIVES –

WHAT THEY TELL US ABOUT THE RISKS POSED TO UK PESTICIDE STANDARDS

The impact of new UK FTAs isn't limited to being exposed to higher levels of pesticides on imported food. FTAs could also lead to British farmers using more pesticides domestically – a scenario made more likely if increased post-Brexit competitive pressure from countries with weaker pesticide standards[42] drives UK farmers to intensify their production methods in order to compete with an influx of cheap imported food.[43] FTAs could also prompt the UK Government to abandon the EU's precautionary approach to approving new pesticides and setting permitted residue levels. This would amount to a systemic dismantling of UK pesticide approval processes, accompanied by an enforceable treaty obligation, in the form of an FTA, to lower thresholds for banning pesticides. Such an obligation could lock in a new approach to domestic pesticide approvals, which would be very difficult to reverse.

There are different levels of detail regarding the negotiating demands on pesticides from different trade partners. Existing documents – both leaked and formal – reveal that moving the UK away from the EU approach to regulating pesticides is a key objective for both the US[44] and India.[45] Less detail is available for Australia though analysis of other FTAs that it has concluded suggests that it would also apply pressure to lower pesticides protections.

UK-US

The US is particularly significant, as negotiations have progressed the furthest, and the US has emphasized that moving away from the EU's precautionary approach is a key requirement for the FTA. This has attracted media coverage with respect to 'chlorinated chicken'. Despite receiving much less attention, the demand applies equally to pesticides. The US has long pushed for the EU to abandon the hazard-based approach and adopt the far weaker risk-based approach which is based on the belief that risks to human health or environment can be managed, without having to remove a harmful substance from use (see page 7 for more detail on hazard vs. risk).[46] This negotiation is also crucial because, if the UK commits to moving away from the EU approach, conceding to similar demands in negotiations with the other trade partners will be relatively straightforward, because the UK will have already changed its domestic regulation.

In February 2020, the UK Government published its objectives for trade negotiations with the US.[47] With regards to pesticides, the UK's stated objectives provide scant detail and are, in some cases, entirely contradictory. For example, a top line reading of the document implies that the UK Government will refuse to lower pesticide standards, with reassuring statements such as the following peppered throughout:

- *"Any agreement will ensure high standards and protections for consumers and workers, and will not compromise on our high environmental protection, animal welfare and food standards.*
- *Any trade agreement with the US must work for UK consumers, farmers and companies and the Government will strongly defend our right to regulate in these areas in the public interest.*
- *The Government's manifesto has made it clear that 'in all of our trade negotiations, we will not compromise on our high environmental protection, animal welfare and food standards.'"*[48]

While these commitments should be celebrated, they do not bind the UK Government to maintain its current standard of protection. The UK's trade negotiators will come under a huge amount of pressure to weaken pesticide standards. In order to ensure that they are able to resist these efforts, the UK Government should enshrine these promises into UK law, a step they have not yet taken.

Looking at the 'Summary of Specific Negotiating Objectives'[49] from the US Trade Representative (USTR) which were published in February 2019, offers no reassurance. The section on SPS Measures – the chapter under which most pesticides issues are dealt with – reveals the US attempting to weaken UK pesticide standards in a wide range of ways including:

- Pressuring the UK to abandon the Precautionary Principle and hazard-based approach

  Endorsing 'science-based' regulation may appear to be politically neutral, but the concept has long been used by the US Government specifically to attack the use of the Precautionary Principle. This is made clear on the US Chamber of Commerce website, which states as its objective: *'Ensure that regulatory decisions are based on scientifically sound and technically rigorous risk assessments, and oppose the adoption of the Precautionary Principle as the basis for regulation.'* [50] The EU's more cautious approach to approving new pesticides is underpinned by the Precautionary Principle, which is upheld by the EU founding treaty[51] as well as EU legislation on pesticides. If the UK agrees in a US-UK FTA that it will ensure its risk assessment is 'science-based', the US can challenge UK bans of US agricultural exports due to pesticide levels. Violations could ultimately lead to US trade sanctions against the UK. (see page 6 for more detail)

- Aggressively pursuing removal of agricultural trade restrictions

  The US Government has taken an aggressive approach to trade policy. In its negotiating objectives for the UK FTA it sets out an aim to *'establish a mechanism to remove expeditiously unwarranted barriers that block the export of U.S. food and agricultural products*.'[52] It is unclear what this 'mechanism' will be, but this language clearly signals a commitment to take a proactive approach to enforcement in this area so that food containing higher levels of more toxic pesticides can be imported into the UK.

- Pushing the UK to adopt weaker international standards and establish rules that prevent the introduction of future regulations

  International standards for pesticides come from the Codex Alimentarius (CA). As documented on page 19, Maximum Reside Levels set by Codex tend to be lower than those set by the EU, and the US has, in TTIP negotiations, attempted to build in Codex standards as a way of weakening EU standards. US objectives for the UK include rules to *'further encourage the adoption of international standards'*[53]. The US-Mexico-Canada FTA (USMCA), for example, cites the CA as a source of international standards that Parties are required to use; it requires them to explain their rationale if they depart from them.[54]

71% of people agree that it is important that the UK government resists pressure in trade negotiations with the USA to overturn bans on pesticides, even if this means the "best" trade deal cannot be reached.

YouGov polling, 30th April - 1st May 2020

- Calling for the UK to accept the 'equivalence' of UK and US regulatory measures.

  In trade policy, 'equivalence' refers to achieving the same regulatory objective, sometimes described as a 'level of protection', by different means. Like 'science-based', 'equivalence' is a loaded term for US negotiators. The US Government has written that: *"… the United States believes there are instances where the EU should* ***recognize current U.S. food safety measures as equivalent to those maintained by the EU*** *because they achieve the same level of protection. If the EU recognized the equivalence of U.S. measures, trade could be facilitated considerably. (Emphasis added)".*[55]

  The US argument is that many EU bans and restrictions on US products, including those that result from its stricter approach to pesticides, 'disregard the fact that the US actually achieves an equivalent level of protection'. In this view, 'the EU approach is not safer to consumers; it's non-scientific and designed to keep out imported products'.[56] USMCA includes obligations for trade partners to recognise the equivalence of each other's regulation, which would apply to pesticide regulation.[57]

- Requiring the UK to consult with the US Government and private sector on upcoming regulations

  Despite the fact that FTAs include a dispute settlement mechanism, in reality it is rarely used, [58] and many SPS obligations are process-oriented and ostensibly cooperative. They require information-sharing, and allow for monitoring and ongoing dialogue between regulators. The UK Government would be obliged to *"address significant issues raised by stakeholders"*[59] and justify all new regulations, even those designed to reduce pesticide-related harms to human health or the environment.

  These aren't just transparency requirements, but provide the opportunity for foreign lobby groups, including the powerful US agrochemical industry, to apply pressure directly to domestic regulators. Such commitments could influence UK regulators to approve new active substances that exporters want to use, and to match their approved residue levels. Such provisions are not as obvious in their impacts as a successful challenge in a trade tribunal, but when put into practice would encourage the UK to keep pace with the ever-expanding list of approved pesticides of its trade partners.

- Preventing the UK from requiring other trade partners to raise their own pesticide standards, in case this has a knock-on effect on US exports.

  As outlined in their negotiating objectives, the US seeks to "*Obtain commitment that the UK will not foreclose export opportunities to the United States with respect to third-country export markets, including by requiring third countries to align with non-science based restrictions and requirements or to adopt SPS measures that are not based on ascertainable risk*." This would prevent the UK Government from negotiating for other countries to raise their pesticide standards to meet those of the UK in order to facilitate frictionless trade.

77% of people are concerned that if a future trade deal with the USA involved Britain lowering our current pesticide standards that it would have a negative impact on the environment. **48%** of people are very concerned.

YouGov polling, 30th April - 1st May 2020

UK-EU

The UK's objectives for trade negotiations with the EU were published in March 2020.[60] They provide far more detail than the UK Government's US negotiating objectives, including some major red flags indicating that the UK Government is planning to diverge considerably from the EU's precautionary approach to regulating pesticides.

Similarly to the UK-US negotiating objectives described above, they mention removing *'regulatory barriers to trade'*[61] and '*the use of relevant international standards'*[62], both of which could imply a lowering of UK pesticide standards. Specifically on SPS Measures, the UK Government once again sets out its objective to "*…ensure parties' SPS measures do not create unjustified barriers to trade in agri-food goods"*[63], again implying that the UK sees EU standards as overly precautionary. The objectives also reveal the UK Government calling for "*…an equivalence mechanism for SPS measures."*[64], implying that the UK Government may be planning to use this argument (which has proved effective for the US Government) in negotiations with the EU.

However, in stark contrast, the EU negotiating objectives are very clear that it will be pushing for the UK to maintain *"high standards of protection of workers' and consumers' rights and of the environment"*.[65] It will be trying to lock down a commitment to 'non-regression' whereby both the EU and UK are unable to weaken standards below the level that they stand at the end of the transition period in December 2020. While partly driven by concerns over protecting human health and the environment, in fact these efforts by the EU are largely motivated by economic considerations. Its negotiating objectives state *"… the envisaged partnership must ensure open and fair competition, encompassing robust commitments to ensure a level playing field."*[66] The EU has been clear from the beginning that it will not allow imports of agricultural produce from the UK unless they meet its rigorous standards. Otherwise, the EU risks undermining its own farmers by allowing in cheap UK food produced to lower standards.

Given that the EU is pushing for UK pesticide standards to remain closely aligned with its European counterparts, while the UK is clear that it wants to diverge, it remains to be seen whose trade negotiators will triumph.

UK-Australia

At time of writing (June 2020), the UK had not yet published its detailed negotiating objectives for a trade deal with Australia. The key information available, therefore, is from a brief, written statement from International Trade Secretary Liz Truss published in early February entitled 'Free Trade Agreements with the Rest of the World'.[67] In this statement, Truss says that the UK *"… will maintain its own autonomous sanitary and phytosanitary (SPS) regime to protect public, animal and plant life and health and the environment*" and reiterates the Government's commitment to *"…not compromise on our high environmental protection, animal welfare and food standards"*.[68] However, it also mentions aiming to *"…remove measures that currently restrict UK trade and to prevent their imposition in future"*, both of which could be a more publicly-palatable way of saying that the UK will weaken its pesticide standards.

Information on the Australian Government's negotiating objectives is, if anything, even more limited. The webpage on the Australian Department of Foreign Affairs and Trade states that *"An Australia-UK FTA would remove barriers* to trade in goods" but provides no further detail and makes no mention of consumer protection or environmental or human health standards.[69]

It is important to note that attempts to weaken pesticide standards via trade deals using the tactics described above are not limited to the US. For example, Australia is Party to another FTA that takes a similar approach to food safety: the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). Like USMCA, CPTPP reduces the ability of Parties to rely on the Precautionary Principle[70] and ties them to international standards[71]. It also emphasises the requirement that Parties must consider whether their regulations are 'equivalent' to those of other Parties.[72]

UK-India

While India hasn't developed formal negotiating objectives for the UK, or vice-versa, a leaked report from India-UK trade talks reveals that increasing EU Maximum Residue Levels for pesticides and removing potential restrictions on pesticides with endocrine disrupting properties (known as EDCs) are among its priorities.[73]

TRADE AGREEMENTS OFFER LIMITED OPTIONS FOR SAFEGUARDING UK PESTICIDE STANDARDS

Of course, the UK isn't compelled by trade negotiations to lower its pesticide standards. It can refuse to concede on these negotiating objectives. The EU, for example, has maintained high levels of protection while concluding a large number of trade agreements. This includes FTAs with Japan (EU-Japan Economic Partnership Agreement[74]) and Canada (Comprehensive Economic and Trade Agreement or CETA[75]), who have a less precautionary approach to pesticides.

Yet the EU's FTAs also show the limited prospects for the UK to 'export' a precautionary model of pesticides regulation. These FTAs don't actively promote a precautionary approach – it isn't mentioned in the SPS chapter of EU-Japan EPA or CETA. In fact, through its FTAs the EU has subjected itself to some new pressures to deregulate pesticides. CETA, for example, establishes a 'Joint Management Committee' which aims to provide regular information exchange, including on the scientific basis for a risk assessment[76] . Such 'process' requirements allow Canada and Japan to exert more pressure on the EU to lower current protections on pesticide use, which could have the ultimate aim of lessening restrictions on pesticides. However, on the whole, these obligations are less binding than in US FTAs, and better balanced by commitments to upholding health and environmental aims.

All US and EU FTAs contain environmental chapters that require countries to enforce their environmental laws – and not to lower their standards of protection – in order to benefit trade and investment. However, for these chapters to have any effect, not only would a country have to prove to an FTA tribunal that another country was systematically not enforcing its own domestic pesticide laws, but that it was doing so in order to cut its prices so that its exported products would have a competitive advantage. This makes the obligation tough to enforce, and there have been no challenges based on environmental non-enforcement in either EU or US FTAs.

79% of people are concerned that if a future trade deal with the USA involved Britain lowering our current pesticide standards that it would have a negative impact on people's health in the UK. 49% of people are very concerned.

YouGov polling, 30th April - 1st May 2020

THE ROLE OF THE WORLD TRADE ORGANIZATION IN MAINTAINING UK PESTICIDE STANDARDS

While there doesn't seem to be much scope for using FTAs to raise trade partners' pesticide protections, the UK can attempt to at least maintain international norms established in the WTO. The WTO SPS Agreement is the international equivalent of an FTA SPS chapter – it establishes the rules for trade in the area of food safety, which forms a baseline that some 164 countries have agreed.

The US approach, which is evident in CPTPP, has been to go beyond the WTO by requiring that its trade partners give more access for US regulators and accommodate the US approach described above. A good example of this is the Precautionary Principle. The WTO SPS Agreement allows Parties to undertake a limited application of the Precautionary Principle.[77] But CPTPP eliminates this possibility and increases the scope for Parties to challenge other Parties' MRLs or pesticide bans on the basis that they are not 'scientific'. In contrast, the EU has already signed up to the WTO but prevents FTAs from forcing it to agree to anything beyond what the WTO already requires in terms of deregulation and market access.

The WTO SPS Agreement encourages countries to recognize the equivalence of each-others' regulation if an exporting Member 'objectively demonstrates' equivalence.[78] However, the exporter must establish that its measures meet the objective, defined here as 'appropriate level of protection' *as determined by the importing country*. It also stipulates that '*Members shall, upon request, enter into consultations…*' to recognise multilateral or bilateral equivalence.[79] In other words, these rules impose an obligation to talk, but it is up to the importing country to determine whether a regulation meets its standards. The WTO does not force countries to recognise each other's regulation as equivalent – it just encourages them to do so.

The EU generally replicates this WTO approach, as in both CETA[80] and the EU-Japan Economic Partnership Agreement[81]. USMCA and CPTPP, on the other hand, go further than the WTO, by putting more pressure on Parties to determine that US regulations are 'equivalent' on a system-wide basis.[82] This is a huge expansion of what the WTO SPS agreement requires, as it means that they don't want to target just one regulation at a time. Instead, these FTAs want Parties to recognise the 'equivalence' of the entire range of US food safety regulation, from pesticides, to GMOs, to so-called chlorinated chicken, to the use of antibiotics and hormones in meat, which the EU has also opposed.

7% of people agree that reaching the best trade deal with the USA should be the priority, even if this means overturning bans on pesticides.

YouGov polling, 30th April - 1st May 2020

THE POLITICS OF UK FTAS

As international agreements, FTAs are only as influential as participating countries choose to make them. However, the UK may be particularly vulnerable to weakening its pesticide regulation through FTAs. This is due to a combination of political pressure to conclude FTAs in order to recoup lost EU market access and 'make a success' of Brexit, pressure from some UK lobby groups, and the fact that EU exit has led to a 'governance gap' in terms of UK institutions, systems and staff.[83]

The UK regulatory system is already in flux and subject to fewer checks and balances than the EU provided. Thus, rather than having a settled domestic regulatory framework as its starting point, the UK Government is scrambling to bring EU rules into the UK lawbooks. In so doing, it has replaced a system of EU checks and balances with discretionary powers for UK Ministers to amend, revoke and make regulations on how active ingredients in pesticides are authorised, and amend the Maximum Residue Levels permitted in food '*as Ministers consider appropriate*.'[84]

This makes it much easier for the UK to change its pesticide regulations to accommodate trade partners. This is particularly concerning as the UK Parliament already has a weak influence on UK trade negotiations as compared to, for example, the EU or US,[85] and the UK Government has resisted reforms partly on the misleading claim that Parliament will have to make changes to legislation to bring an FTA into force.[86] However current UK pesticide legislation (as brought over from EU law post-Brexit) provides extensive scope for Ministers to make future changes with little scrutiny.[87] The fact that UK pesticide regulation can be changed by ministers removes one of the main powers of Parliament in UK trade negotiations: its ability to block an FTA by refusing to pass the primary legislation that's needed to bring FTA reforms into law.


REDDICK

COUNTRY PROFILES –

DIFFERENT APPROACHES TO REGULATING PESTICIDES AND HOW THEY COMPARE WITH THE UK

Beyond the universally accepted principle that pesticides must be regulated in order to minimise harms to health and environment, there is not a standard global approach to the governance of pesticides. This inevitably leads to a range of legislative and policy approaches in different countries to controlling which specific pesticides are approved and under what conditions they are permitted for use. Countries also diverge significantly on which pesticides are allowed to appear in food and in what quantities.

The following is an overview of the current approaches to pesticide regulation taken in each of the three focus countries and how it compares to the current UK system in terms of protecting human health and the environment. Until the end of the transition period, the UK remains under the EU pesticide regime with the European Commission continuing to authorise active substances (e.g. glyphosate) and setting Maximum Residue Limits, while the UK authorises specific pesticide products (e.g. Roundup). Therefore, the section below refers to UK and EU pesticide standards interchangeably since they are, at least until 31st December 2020, in effect identical.

Despite a severe lack of monitoring data, this section also includes a brief look at some of the key pesticide-related harms that have been recorded in the countries in question in order to illustrate how the various approaches to regulation play out in terms of real world impacts.

US

Approach to regulating pesticides

The US is considered a highly supportive and friendly business environment for the pesticide industry. This approach has accelerated under the current Trump administration and it's therefore crucial that UK trade negotiators act accordingly to protect UK citizens from the demands of the US agrochemical industry.

In stark contrast to the EU's largely hazard-based approach, the US operates a risk-based authorisation system (see page 7 for more detail on hazard vs. risk). Rather than proving that a pesticide is safe to use or that the risk can be managed, the pesticide manufacturer simply has to demonstrate that products *"will not generally cause unreasonable adverse effects on the environment"*.[88] Further, the *"unreasonable adverse effects"* are caveated with; *"any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide…"*[89] This approach in effect puts economic considerations above human health and environment.

Even if the full risk-assessment process was perfect, under US pesticide legislation, "conditional" temporary registrations allow a new pesticide to be placed on the market for an unspecified amount of time while the manufacturer generates the requisite data for registration, a system that does not currently exist in the UK. At one point in 2012, more than 65% of active pesticide products in the US were conditionally registered, meaning they did not have adequate information for a complete risk assessment when allowed for use. Lobbying on TTTIP (the draft EU-US trade deal) revealed how the US pesticide industry were pushing for the EU to adopt a similar system.[90]

The close relationship between government regulators and the pesticide industry was highlighted in 2019 by the appointment of a former employee of the pesticide company Monsanto to head the US Fish and Wildlife Service (FWS). The FWS had previously called for bans on neonicotinoids and restricted their use in areas under its control, but those restrictions were soon overturned under the new leadership.[91] This is not an isolated case; there is a long and ignoble history of revolving doors between the pesticide industry and regulatory agencies in the US.[92]

The current US administration has taken a number of actions that put the interests of the pesticide industry before the health of people and the environment. As mentioned, the ban on the use of neonicotinoids and other pesticides in wildlife refuges under the control of the US FWS was reversed.[93] In August 2018, the US Supreme Court ordered the Environmental Protection Agency (EPA) to finalise plans to end the use of chlorpyrifos, a pesticide recently banned in the EU due its negative impact on children's cognitive development. In July 2019 the EPA announced that it would not after all ban the pesticide.[94] In February 2020, a study revealed that the EPA had failed to increase MRLs to account for the extra margin of safety required to protect children's health for almost 90% of the most common pesticides. Of the 47 risk assessments examined, the mandatory tenfold safety factor designed to protect children (who can often be more vulnerable to the effects of pesticides) had been applied in only five cases.[95]

There is little subterfuge in the relationship between the pesticide industry and the current administration. In a document that was revealed as part of glyphosate litigation in the US, it was reported that a policy adviser based within the White House had said, "*We have Monsanto's back on pesticide regulation. We are prepared to go toe-to-toe on any disputes they may have with, for example, the EU. Monsanto need not fear any additional regulation from this administration*."[96] Again, this sits in stark contrast to recent efforts by the EU to reduce the influence of the pesticide industry on decision-making, including MEPs banning Monsanto lobbyists from entering the European Parliament after the multinational refused to attend a parliamentary hearing to answer questions related to allegations of regulatory interference by the company.[97]

A range of key EU initiatives are also underway aimed at making the pesticide regime less opaque and therefore less susceptible to lobbying by vested interests. These include efforts to make the approvals process more transparent and reduce the reliance on industry-generated data that currently forms the cornerstone of the decision-making process for pesticide approvals.[98] Work is also being undertaken by the EU to improving the risk assessment process in regard to bee and pollinator

health and for a strengthened definition of what constitutes an endocrine disrupting chemical (EDC). Moreover, the current President of the European Commission, Ursula von der Leyen, has publicly stated that the issue of pesticides needs to be addressed if the EU is to be a true environmental leader.[99] By doing so she has clearly indicated the path of travel for the EU on pesticides, and that it is moving in the opposite direction to that of the Trump administration.

Pesticide-related harms

Pesticide-related harms in the US have been documented since the 1960s and, in many cases, ignored or overlooked by successive administrations.

Acute pesticide poisoning is an ongoing issue for the public, farmers and farmworkers. As an example, the use of organophosphates (OPs) resulted in approximately 2000 reported OP poisonings each year between the years 2012 and 2016.[100] A total of 26 OPs are authorised for use in the US, in contrast to just four in the EU/UK (see Table 12). The actual figures for poisonings across the US are not clear and it is thought that there is significant underreporting of incidents. However, a report published in 2002 showed that, in California alone, thousands of farmworkers are being poisoned by pesticides each year.[101] One of the main factors contributing to high levels of pesticide exposures in farm workers and rural communities is the prevalence of aerial spraying. Reducing the use and impact of aerial spraying is one of the key articles in the EU Sustainable Use Directive[102] and the practice is largely banned in the UK.

Numerous environmental impacts have been documented over the years. The US national bird, the bald eagle, was severely harmed by DDT in the 1960s and 70s with huge reductions in population numbers and the species has continued to suffer to this day as a result of pesticide poisoning. Between 2008 and 2017 around 50 bald eagles were reported to have been poisoned by pesticides, and the past three years has seen a spike in deaths in the States of Maryland and Delaware.[103]

Contamination of water bodies is an issue in the US that has impacts far beyond water quality. Puget Sound in the Pacific North West has high levels of agricultural pesticide contamination, leading to orcas, salmon and numerous other marine species being poisoned. Chlorpyrifos, a pesticide which is not authorised for use in the EU, but which the EPA recently declined to ban, has been identified as one of the pesticides responsible for the contaminations.[104] Like many other parts of the world, dramatic declines in insect, bee and pollinator populations in the US are being driven by pesticide use and are having subsequent knock-on effects on birds and other species along the food chain.[105]

Herbicide resistance – where problematic pests and weed species develop immunity to active substances – is a problem that has been growing rapidly throughout the US over the last 50 years due to overuse. Resistance issues have been felt particularly in the Corn Belt throughout the Midwest where the overuse of herbicides is resulting in the development of what are being termed 'superweeds'.[106] To combat resistance to glyphosate, the most widely used herbicide, the use of an alternative herbicide, dicamba, has been on the rise in the past five years. This has brought with it unpredicted consequences. Dicamba is prone to drift and its use has led to non-target crops being killed with devastating financial implications for many farmers.[107]

While there are clearly negative environmental and human health impacts resulting from pesticide use in the UK[108], the extent of the problems appear to be dwarfed by those experienced in the US. This is largely due to the scale of US agriculture, the ubiquity of aerial spraying and the permitted use of many Highly Hazardous Pesticides banned in the UK, coupled with weak and opaque regulatory systems which enable elite capture by the agrochemical industry. The question is would agreement to lower pesticide standards to meet the terms of a UK-US trade deal help to usher in the same pesticide-related problems we see in the US?

Australia

Approach to regulating pesticides

Pesticides in Australia are regulated and approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA). Any agricultural product, including pesticides, that is imported, sold or used in Australia must have APVMA approval. Approximately 8000 pesticide products are registered for use in Australia, 75% of which are for use in agriculture.[109] Compare this to 2,900 in the UK and it becomes obvious that UK trade negotiators will have to withstand considerable pressure in order to maintain existing pesticide standards.

Like the US, the Australian system uses a 'risk-based approach' to approving active substances which makes the assumption that even when a particular substance has intrinsically hazardous properties (for example is found to be carcinogenic) the associated risks can be effectively managed by stipulating how and where it can be used. This sits in stark contrast to the more 'hazard-based approach' of the EU (and the UK currently) under which substances found to have intrinsically hazardous properties should be removed from use.[110] (See page 7 for more detail on hazard vs. risk).

In another significant difference from the EU/UK approach, the Australian system has no set time period for reviewing the approval of either active substances or pesticide products, meaning that they can remain in use indefinitely once authorised. As a result, pesticides that have been shown to cause harm can continue to be used for many years. A review can be triggered if there is evidence to suggest that there is some environmental or human health cause for concern. However, by this point negative impacts might have already occurred and some (such as the development of malignant tumours or the extinction of a particular species) may have been irreversible. This system also puts the onus on civil society organisations and individuals to prove that a pesticides is harmful, rather than the manufacturer having to demonstrate that it is safe to use.

Meanwhile, under the current UK system, active substances are approved by the EU for a maximum of fifteen years, and substances of concern often receive less (as was seen in 2017 when glyphosate was reauthorised for just five years). Similarly, pesticide products authorised in the UK can only be granted a maximum of 15 year's license before having to go through a risk assessment process to be reapproved.

The outcomes of these different approaches is evident. For example, organophosphate pesticides, some of the most harmful to human health, are still widely used in Australia.[111] There are currently 33 organophosphate pesticide active substances approved for use in Australia (see Table 12)[112], compared to just four in the UK.

Pesticide-related harms

Despite a lack of detailed monitoring data, evidence shows that pesticide use in Australia continues to drive harms to both human health and the environment.[113]

Agricultural pesticide use has resulted in contamination of Australian rivers and water bodies that in turn has impacted on aquatic species, with effects felt elsewhere in the ecosystem.[114] In 2019, testing of the waterways flowing into the Great Barrier Reef revealed a cocktail of 22 different pesticides, posing a risk to insect larvae, crustaceans and plant life such as seagrass and corals.[115] While Australian bees and pollinators do not appear to be impacted by neonicotinoids to the same extent as those in Europe and the US, a recent report from Friends of the Earth Australia reported the death of 10 million bees in New South Wales as a result of exposure to fipronil (which has been banned by the EU but remains in common use in Australian agriculture).[116]

In terms of pesticide-related human health impacts in Australia there is very little data available. However, there is evidence to suggest that the continued use of organophosphates by farmers (see Table 6) might be linked to elevated levels of Parkinson's disease in some areas.[117]

The overuse of pesticides has also driven major problems with pest and weed resistance which continue to be a huge challenge for Australian farmers.[118]

India

Approach to regulating pesticides

India is the world's second highest user of pesticides after China. The Indian pesticide regulatory system is based on a Bill introduced in 1968 and fails to address the challenges associated with pesticide use in the 21st century.[119] While a new regulation has been proposed – the 2017 Pesticide Management Bill – it has not yet been adopted and in the meantime India's governance of pesticide remains opaque, providing inadequate protection to both human health and environment.[120]

Like most non-EU countries, India follows a 'risk-based approach' which emphasises managing the risks associated with pesticide use. This is despite the country suffering from weak governance and enforcement, high poverty levels and low literacy rates which mean that many Indian farmers are unable to read the label on a pesticide product to ensure they are using it properly, let alone implement the required risk management approaches such as accessing PPE. Failures in pesticide management mean that Indian agricultural produce often suffers from problems of high residues which can disqualify it from being imported to EU countries. The Indian Government would therefore have much to gain by negotiating to weaken UK standards on pesticide residues so that Indian growers are able to export produce that wouldn't be permitted under the EU system.

In contrast to the UK, India has no mechanism for post-approval review of pesticides meaning that some pesticides authorised in the 1970s are still in use, regardless of new information relating to negative health or environmental impacts. The use of counterfeit or illegal pesticides is also a major issue in India, accounting for approximately 30% of all pesticides.[121] Their use can often pose an even greater risk to human and environmental health than the use of legal pesticides.

India's approach to pesticides is far more trade-oriented than that of the UK. Crops produced for export are grown strictly in accordance with the requirements of the import destination country, ensuring that they don't exceed the relevant Maximum Residue Levels (MRLs). So, for example, Indian rice destined for the European market will be grown in a way which keeps residues below the MRL set by the EU.

In 2019, in a bid to shore up exports and better facilitate trade, Indian rice exporters called for a national ban on all pesticides not authorised by the EU and US.[122] While this could lead to the positive outcome of highly toxic pesticides being banned, the effort did not appear to be in any way motivated by human health or environmental concerns. Meanwhile, the Indian Government has reportedly been lobbying the EU to relax its MRLs in order to remove what they view as a non-tariff trade barrier.[123] Both of these examples reveal that India's top priority is to ensure the protection of its agricultural exports, with little to no regard for minimising the negative impacts of pesticides.

Pesticide-related harms

India has a dramatic history of pesticides causing harm to human health which should be understood by UK trade negotiators. It is reported that roughly 30,000 people die from pesticide poisoning every year in India.[124] Given that many Indian farmers cannot access PPE, accidental pesticide poisonings are a regular occurrence causing roughly 7,000 deaths per year.[125] In just one example from 2017, 50 farmers died and a further 800 were hospitalised from suspected pesticide poisoning in a major cotton growing area in the State of Maharashtra.[126] India also suffers from high rates of farmers committing suicide by swallowing pesticides. Pesticides are, in many cases, both the means and the cause of such suicides as farmers buy agrochemicals on credit but find that yields are too meagre to pay off these costs. In fact studies have found that poisoning, mostly from pesticides (chiefly organophosphates) used in agriculture, is the leading method of suicide in both men and women.[127]

Beyond these fatalities there are also many instances of pesticides causing other health problems. The well-documented cases of children born with birth defects in the cashew growing area of Kerala is just one example. It eventually helped initiate a global phase-out of the insecticide endosulfan.[128]

Given the extent of pesticide-related health problems, allowing agricultural imports from India under any regulations weaker than our current European system should be viewed with extreme caution by UK trade negotiators.

FULL RECOMMENDATIONS TO THE UK GOVERNMENT:

- Do not allow any weakening of UK pesticide standards via post-Brexit trade agreements. This must include:
  - » Ensuring that no currently banned pesticides are allowed for use in the UK
  - » Ensure that food containing detectable residues of currently banned substances cannot be imported into the UK
  - » Ensure that Maximum Residue Levels are maintained or reduced.
- Ensure a level-playing field for UK farmers by maintaining existing UK pesticide standards, thereby enabling them to continue exporting to the EU.
- Prevent UK farmers from being disadvantaged by cheap food imports produced to weaker pesticide standards in non-EU countries.
- Take a global lead by strengthening the UK's new standalone pesticide regime to be more effective than the EU system in terms of protecting human health and the environment. Where this is not possible, to ensure minimum standards maintain dynamic regulatory alignment with the EU pesticide regime, including all decisions on the authorisation of active substances and Maximum Residue Levels.
- Maintain the Precautionary Principle as the basis upon which all pesticide-related decisions are made and strengthen its implementation. This includes maintaining the so called 'hazard-based' approach to pesticide authorisations.
- Preserve the power for the UK to exercise its right to go above and beyond the status quo and applicable international standards to continually strive for higher levels of consumer and environmental protection.
- Introduce additional legislative protections to ensure that any change to food safety standards or environmental protections subsumed in trade agreements can only be introduced via primary legislation.
- Ensure that FTAs do not hamper the ability of the devolved nations to introduce stricter measures to protect human health and the environment from pesticides.
- Resist all attempts by trade partners to push the UK to revert to weak Codex Alimentarius standards on pesticide residues.
- Reject clauses in FTAs which create additional obligations to justify taking a more stringent approach to protecting human health and the environment from pesticides.
- Fill the regulatory and governance gaps created by EU exit to ensure the UK pesticide regime is fit-for-purpose in terms of protecting human health and the environment and better able to resist efforts from trade partners to drive down UK standards.
- Enshrine into UK law the commitment that the UK will not compromise on environmental protection or food standards in FTAs.
- Ensure that FTAs are developed in the open with the opportunity for full parliamentary and public scrutiny. This should include a meaningful role for MPs and Peers in trade negotiations including setting the mandate, amending and rejecting trade deals and reviewing trade deals with the ability to withdraw from them in a timely manner.
- Take a leading role on pesticide issues within the World Trade Organization and push for it to prioritise protecting human health and the environment from pesticide-related harms.

Please note: specific language for use in developing FTAs so that pesticide standards are maintained is listed in the Annex on page 42.

ANNEX

Upholding UK pesticides regulation through FTAs – language for UK negotiators

The following are recommendations for FTA language to ensure that UK trade agreements protect current UK pesticide protections. By upholding the UK's right to regulate, they would greatly limit the grounds for an FTA partner to challenge UK pesticide protection on the basis that it violated an FTA commitment.

Include the precautionary principle as a cross-cutting commitment in Trade and Environment chapters, i.e.:

- 'the Parties shall uphold the precautionary principle in their environmental laws and practices'

Include the precautionary principle in the SPS chapter. This could be included in the 'Objectives' section of the chapter, i.e.:

- 'allow Parties to adopt or maintain sanitary and phytosanitary measures necessary for the protection of human, animal, or plant life or health, including on a provisional basis if relevant scientific evidence is insufficient.

  (Note that such language will likely only be feasible with trade partners who share a domestic legislative commitment to the precautionary principle)

The following are examples of commitments that could undermine the UK's current hazard-based approach, and should be avoided:

Avoid commitments on furthering science-based risk assessment, i.e. USMCA objective:

- encourage the development and adoption of science-based international standards, guidelines, and recommendations, and promote their implementation by the Parties;

Avoid obligations to explain the rationale for departing from international standards, i.e. USMCA objective:

- If a Party has reason to believe that a specific sanitary or phytosanitary measure adopted or maintained by another Party is constraining, or has the potential to constrain, its exports and the measure is not based on a relevant international standard, guideline, or recommendation, or a relevant standard, guideline, or recommendation does not exist, the Party adopting or maintaining the measure shall provide an explanation of the reasons and pertinent relevant information regarding the measure upon request by the other Party.

Avoid commitments to 'system-wide' assessment of the equivalence of sanitary and phytosanitary measures

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TOXIC TRADE

How trade deals threaten to weaken UK pesticide standards

A report by PAN UK, Sustain and Dr Emily Lydgate

Pesticide Action Network UK

PAN UK is the only UK charity focused on tackling the problems caused by pesticides and promoting safe and sustainable alternatives in agriculture, urban areas, homes and gardens. We work tirelessly to apply pressure to governments, regulators, policy makers, industry and retailers to reduce the impacts of harmful pesticides to both human health and the environment.

Our work includes campaigning for change in policy and practices at home and overseas, co-ordinating projects which help smallholder farming communities escape ill-health and poverty caused by pesticides, and contributing our wealth of scientific and technical expertise to the work of other organisations who share our aims.
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Sustain: The alliance for better food and farming, advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, improve the living and working environment, enrich society and culture, and promote equity.

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