BANNED AND HAZARDOUS PESTICIDES IN EUROPEAN FOOD

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WHAT GOES AROUND COMES AROUND – BANNED PESTICIDES IN YOUR EXOTIC FRUIT AND TEA

The EU Pesticide Regulation (EC 1107/2009) is known as the most stringent in the world - but not stringent enough to ensure that banned pesticides do not end up in our diet, a PAN Europe survey reveals [Technical Report, TR].

The analysis, which is based on the 2018 official food monitoring data of pesticide residues analysed by Member States, **shows that 74 pesticides - that have been banned for use in the EU because of health and environmental concerns - were found as residues in 5811 food samples** (6.2% of all samples tested), the majority being plant-based products (75.2%). Up to 8 such pesticides were detected in a single sample (e.g. teas, herbs and fruits). Imported plant-based food contained almost twice as many such residues (8.4%) than food produced in Europe (3.8%). Exotic fruit sold in Europe such as guavas (85%), goji berries (55%), breadfruit (42%) and cherimoyas (40%) are on the top of the list, together with teas (37%), peppercorns (29%) and coriander leaves (25%).

The overall picture on pesticide residues in food is also very concerning, since two thirds (68.7%) of all fruit was found to contain pesticide residues, of which over half were pesticide cocktails (51.6%), with imported food always having more residues than food grown in the EU. Despite EU law requirements (EC 396/2005), the impact that mixtures of pesticides in food have on human health is not assessed by Regulators, leaving consumers unprotected from exposure to these chemicals.

Alarmingly, the highly toxic fungicide carbendazim, a mutagen substance also toxic to reproduction, is the one which was detected the most (1596 samples); this is more samples than some of the authorised fungicides! Other pesticides, highly toxic to bees or aquatic life such as chlorates, chlorfenapyr, omethoate, malathion and anthraquinone were also detected. Our analysis shows that the presence of residues of such pesticides in certain food is in fact legal.

A high number of different pesticides that have been banned in the EU was detected in food coming from China (30), India (25), Thailand (23), Brazil (13), Vietnam (14) and Morocco (12), among others.

Further, the presence of highly toxic and persistent pesticides (e.g. DDT, HCB, chlordecone), mainly in animal-based products, is clear evidence of a past agricultural model whose unsustainability must not be underestimated, and which should be monitored. Illegal use of these dangerous pesticides cannot be excluded.

The irony is that many of these banned pesticides could have been produced in the EU. Once a pesticide is banned in the EU, European companies continue to produce and sell their products to third countries with weaker human health and environmental laws. A recent study by Public Eye and Greenpeace Unearthed revealed that 41 banned pesticides were notified for export from the EU in 2018 predominantly from 7 countries[1]. Our survey shows that at least 22 of those have come back to the EU as they were detected in food consumed in the European market and 19 of them were detected mainly in imported food (Annex). Evidently, the EU benefits from the use of these dangerous substances elsewhere, at the cost of human health and the environment.

[1] Public Eye, Unearthed Greenpeace investigation, 2020; https://www.publiceye.ch/en/topics/pesticides/banned-in-europe

Under the European Green Deal and Farm to Fork Strategy, the EU has committed to set a trade policy that supports an European ecological transition and at the same time promotes a global transition to sustainable agri-food systems[2]. The impact of hazardous pesticides on human health and biodiversity is global, and the EU must take a lead role in stopping support for any practices that jeopardise human health and biodiversity.

To achieve this, as a first step the EU should halt the production and sales of banned pesticides and adopt a zero-tolerance approach for such residues in food. Further, pesticide mixtures in food should be urgently addressed. More importantly, all of this should occur alongside the development and promotion of agricultural practices and alternatives to pesticide use that work together with nature and promote biodiversity rather than destroying it.

HAZARDOUS PESTICIDES MUST BE BANNED ACCORDING TO EU LAW- BUT CAN WE EAT THEM?

The European Union's Pesticides Regulation (EC) 1107/2009 is considered one of the most stringent in the world. It recognizes that pesticides are toxic to human and animal health as well as the environment, and its goal is "to ensure that active substances or products placed on the market do not adversely affect human or animal health or the environment". According to the Regulation, residues of pesticide products should have no harmful effects on human health (including that of vulnerable groups) and no unacceptable effects on the environment; pesticide mixture effects should be taken into account [Maximum Residue Limits Regulation (EC) 396/2005]. As a result, up to 2018, the approval of 15 pesticide substances was not renewed under the Pesticides Regulation following toxicity assessment[3].

EU law, however, does not stop the export of pesticides that are banned in the EU to third countries. In fact, European companies make billions from selling EU-banned pesticides to lower- and medium income countries, taking advantage of their weak national regulations in relation to human and environmental protection from pesticides[4]. The EU has set up a registration system and allows these sales to take place[5].

Often these pesticides are applied in hot climates by workers who use no protection equipment at all, putting their health at an even greater risk. The consequent environmental contamination is causing an increase in diseases in local communities, often in children, and has a devastating impact on biodiversity [UN Special Rapporteur on the right to food[6]].

Evidently, companies selling hazardous pesticides profit from poisoning workers, communities and the environment elsewhere. This is not only a matter of global health and environmental protection, but also of social and ethical rights. In September 2020, there was a public call by UN Special Rapporteur on toxics for

[2] Farm to Fork (EC) Communication; https://ec.europa.eu/food/farm2fork_en
[3] Commission Staff Working Document, REFIT evaluation of Pesticide (EC) 1107/2009 and MRL 396/2005 Regulations https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0087
[4] Public Eye, Unearthed Greenpeace investigation, 2020; https://www.publiceye.ch/en/topics/pesticides/banned-in-europe
[5] The Prior Informed Consent Regulation (PIC, Regulation (EU) 649/2012) administers the import and export of certain hazardous chemicals and places obligations on companies who wish to export these chemicals to non-EU countries. The PIC Regulation applies to banned or severely restricted chemicals listed in Annex I, containing industrial chemicals, pesticides and biocides, for example, benzene, chloroform, atrazine and permethrin.
[6] UN Report on pesticides and the right to food, Human Rights Council, 2017. https://www.ohchr.org/EN/Issues/Environment/ToxicWastes/Pages/Pesticidesrighttofood.aspx

States to "stop exporting unwanted toxic chemicals to poorer countries"[7]. In France, the constitutional court's judgement that as of January 2022 the production, storage and transport of pesticides that have not been approved for reasons related to the protection of human or animal health or the environment under Reg. 1107/2009 are prohibited[8].

When a pesticide is banned, "import tolerances" -a maximum residue limit set for imported products to meet the needs of international trade- are not allowed for pesticides that have been banned in the EU for public health reasons. This means that pesticides that have been banned because of environmental reasons, or for human health reasons other than consumers' risk, can still be allowed in imported food.

Therefore, the EU can import food grown with the use of toxic pesticides from these countries, indirectly supporting the human and environmental poisoning that these pesticides cause. After all, the regulation is not very clear when it comes to ensuring that banned pesticides ought not to be detected in European food.

PAN Europe carried out an investigation to find out whether pesticides banned in the EU [according to 1107/2009 and PIC legislation[1]] are detected in food sold on the EU market, using the EU official food pesticide residue monitoring data [link - Technical Report on the survey]**. The results show that several of them are detected mainly in imported food but also in food produced in Europe. To our surprise, in many cases this is a legal practice, since residues of such pesticides are permitted to be detected in food.**

PESTICIDE COCKTAILS IN OUR DAILY FOOD

The first analysis in our survey [TR, Section 3] showed that about half of the food sold on the EU market contained pesticides (47.7%), and about a third (30.1%) contained two or more pesticides in a single sample [Table 1]. The situation is much worse for plant-based food, and particularly fruit, where two thirds (68.7%) of the samples contained pesticide residues and over half had pesticide cocktails (51.6%). But spices, herbs, teas and mushrooms are also high on the list. Overall, imported food has a higher percentage of residues than food grown in the EU [Figure 1&2].

Despite the legal requirements of the Pesticide and MRL Regulations, the cumulative and synergistic effects of these pesticides present in food are still not taken into consideration, i.e. the consumer safety assessment is carried out as if we were exposed to a single pesticide alone, which is far from the truth. Evidently, with such high percentages of pesticides in food, consumers remain unprotected, as we consume mixtures of pesticides on a daily basis through the food we eat.

[7] UN Press Release, "States must stop exporting unwanted toxic chemicals to poorer countries, says UN expert" https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26063&LangID=E
[8] Decision no. 2019-823 QPC of 31 January 2020 https://www.conseil-constitutionnel.fr/en/decision/2020/2019823QPC.htm

Recent EFSA pilot studies have received criticism for being "unfit" to assess the real risk from combined exposures to pesticides - therefore, the EU should act urgently to address this issue by incorporating an additional safety assessment factor[9].

EU FOOD LACED WITH BANNED PESTICIDES

Our research shows that pesticides banned in the EU (EU-banned) are nonetheless detected in European food, in a significant amount [TR, Section 4]. About **74 EU-banned pesticides were found as residues in 5811 food samples** (6.2% of all samples tested), the majority of which were plant-based products (75.2%) [Figure 3], and up to 8 different banned pesticides were detected in a single sample (e.g. teas, herbs, fruits) [Figure 6]. This is a high number, considering that most authorized pesticides are usually detected in a smaller number of samples. Worryingly, in fruit and vegetables, up to 50 and 48 banned pesticides were detected in total respectively, which prompts the question of how healthy non-organic food is after all [Figure 6].

Toxic substances such as carbendazim, chlorate, and chlordecone are detected all too often in EU food (in 1,596, 1,115 and 928 samples, respectively) [Figure 4]. Others, highly toxic to humans (e.g. DDT, hexachlorobenzene, anthraquinone, omethoate, tricyclazole) and/or the environment (e.g. propargite, chlorfenapyr) are detected in smaller numbers (range 318 to 83 samples), but their presence is still significant if we consider that only a small number of samples is being tested.

A recent survey carried out by Public Eye and Greenpeace Unearthed found that a total of 41 banned pesticides were notified for export from the EU in 2018. Chlorate, propargite and carbendazim are on the top of the list [10]. In our survey, **more than half (22) of these banned pesticides were detected in EU food [Annex I], and the majority (19) were mainly detected in imported products**.

Certain food samples from specific countries seem to contain PICs more often: for example, 80 to 88% of animal fat and milk from the Czech Republic contained EU-banned pesticides along with 79% of chili peppers from Vietnam, 77% of apples from Brazil and 70% of apples from China. This shows that significant amounts of these hazardous pesticides have been used in the production of certain products, putting the health of local populations and that of the environment at great risk [Table 3].

DOUBLE AS MANY BANNED PESTICIDES IN PLANT-BASED FOOD IMPORTS THAN EU FOOD

Alarmingly, most banned pesticides were detected in food of unknown origin (12% and 13.1 for plant based and animal-based products, respectively) but also in imported plant-based food (8.4%), which contained almost twice as many banned pesticides than plant-based food produced in the EU (3.8%) [Figure 5]. Exotic fruits like guavas, goji berries, cherimoyas, breadfruit and passion fruit are on the top of the list (28-85%) [Section 5.1, Figure 10], as well as teas (42%), spices (21%) and herbs (15%) [Section 5.1, Figure 9].

[9] https://www.pan-europe.info/blog/efsa%E2%80%99s-pilot-studies-cumulative-risk-assessment-institutions%E2%80%99-toxic-smoothie-mix
[10] https://www.publiceye.ch/fileadmin/doc/Pestizide/202009_EU-export-pesticides_sankey_EN.pdf

Malaysia, Laos, Iran, China and Vietnam are the countries of origin of products where banned pesticides were most often detected (30-47% range)m whereas the highest numbers of banned pesticides were detected in products coming from China (30), India (25), Thailand (23), Brazil (13), Vietnam (14) and Morocco (12), revealing the use of a number of dangerous substances in these countries [Figure 11]. Brazil, Malaysia, Morocco, Vietnam, India and China are among the top 15 importers of pesticides that are banned in Europe[10].

Our analysis shows that these contaminated products are sold in the EU market. 48-65% of the teas sold in Belgium, Poland, Spain and France have residues of banned pesticides, and up to 6 different banned pesticides were detected in a single sample [Figure 12]. Another food that was very often contaminated is goji berries (range 43-56%), which is considered a "superfood". These berries sold in the Netherlands, Germany and Belgium, contained up to 8 different banned pesticides in a single sample. Similarly, between 38-53% of imported rice in Austria, Portugal and Greece contained banned pesticides. Other fruits and vegetables sold in the EU were also often found with a variety of EU-banned pesticide residues. For example, 12 different banned pesticides were found in beans sold in the UK, 13 in chili peppers sold in Germany and 10 in aubergines. **Evidently, food produced with pesticides banned in the EU is entering the EU food market, and consumers are unknowingly supporting these hazardous practices.**

VERY DANGEROUS PESTICIDES IN ANIMAL PRODCUTS

Residues of dangerous and highly persistent pesticides were found, in significant amounts, in animal products produced in Europe [TR, Section 5.2]. The percentage of animal tissue and milk that contained highly toxic and persistent pesticides such as DDT, chlordecone or hexachlorobenzene (HCB) was in the range of 18-39% for certain samples [Figure 13]. This is of concern considering that these pesticides have been linked to a wide range of diseases in humans, particularly when exposure takes place during early life, making pregnant women and children most sensitive to this exposure[11].

The Czech Republic, Cyprus, Croatia and France are at the top of the list of producers, while the animal products with the highest sum of banned pesticides were from Germany [Figure 14]. Animal products from Sweden, Slovenia, Portugal, Iceland and Austria contained no detectable banned pesticides in their meat product samples.

These persistent pesticides have been banned in the EU and in theory ought not to be used in agriculture; however, they nonetheless enter the food chain because they are present in the environment. They accumulate in fat and can be found in animals (aquatic and terrestrial) due to environmental exposure. Our study shows that in certain countries there is a higher risk of contamination, which ought to be controlled as chronic exposure to these chemicals is a serious concern. Animal feed contamination and illegal use of pesticides should also be examined.

[11] Gheidarloo, M., Kelishadi, R., Hovsepian, S., Keikha, M., & Hashemipour, M. (2020). The association between prenatal exposure to organochlorine compounds and neonatal thyroid hormone levels: a systematic review, Journal of Pediatric Endocrinology and Metabolism, 33(1), 21-33. doi: https://doi.org/10.1515/jpem-2019-0336

THE TOP BANNED PESTICIDES DETECTED

The finding that pesticides that have been banned because they are considered hazardous to human health and/or the environment are detected in our food is of great concern, and illustrates the weaknesses of the current system. Some of the top pesticides detected are highly toxic: not only are they putting consumers' health at risk, they also reveal that food sold in the EU has been produced with the use of these dangerous chemicals. Furthermore, all countries appear to be affected to an extent. This reveals the gaps and weaknesses in the regulatory system that legitimize these practices. Below we examine these gaps by looking at some of the top EU-banned pesticides most frequently detected in EU food.

Carbendazim [TR, Section 6.1], a fungicide substance that was banned in 2014 because it can cause mutations in animals (mutagenic) and can be toxic to reproduction, was detected in 1596 samples, most of them imported. This makes it one of the fungicides most often detected in food, despite being banned. The observation that a high percentage of certain products contained carbendazim, for e.g. apples from Brazil (80%), chili peppers, peppercorns and passion fruits from Vietnam (69 to 45%) and mangoes from Thailand (40%) shows that the EU freely allows the use of this dangerous substance in these countries. Nevertheless, we saw that carbendazim was also detected in Europe, for example in 70% of grapes from Cyprus, 41% of pears from Greece, and in 29% of peas and 25% of beans from Belgium.

Despite its high level of toxicity and the concerns it has raised for consumers, carbendazim residues are permitted in food, as the MRL for several food items is set above the detection limit. Although carbendazim was banned in 2014, its parent compound thiopheneate-methyl was not banned from use in agriculture and therefore the MRLs were never deleted. Unfortunately, in this way it is impossible to know whether farmers use carbendazim or the parent compound, and consumers keep getting exposed to this highly toxic chemical via their food. Using carbendazim in Europe means that farmers are breaking the law but the use of carbendazim elsewhere is legal, and therefore food with carbendazim residues can be freely imported in Europe. Compared to other years, residues of carbendazim have not decreased substantially, indicating that this dangerous pesticide may still be used even in Europe. Furthermore, according to EFSA, the MRLs were exceeded in 23 samples from EU and 91 samples from third countries [EFSA, 2020][12]. According to a recent analysis, chlorate is in the top 10 pesticides that European companies export to third countries for use in agriculture[13].

Similarly, the organophosphate insecticide **omethoate** [TR, Section 6.6] was banned in 2002 in Europe as it is highly toxic to the environment (e.g. bees, aquatic life) and toxic to humans (suspected mutagen, carcinogen and neurotoxic). However, omethoate is also the main metabolite of another organophosphate insecticide, dimethoate, which was only banned recently (2019). Therefore, residues of omethoate continued to be present in food, and although MRLs were lowered, for some foods (cherries, olives and spring onions) residues of omethoate are still permitted, even today. In our research most of the omethoate was detected in food mainly produced in Europe but also in third countries, indicating either the use of dimethoate or the illegal use of omethoate. In any case, according to EFSA, omethoate residues in food exceeded the legal limits in several occasions [EFSA, 2020].

[12] EFSA (European Food Safety Authority), Medina-Pastor, P and Triacchini, G, 2020. The 2018 European Union report on pesticide residues in food. EFSA Journal 2020;18(4):6057, 103 pp. https://doi.org/10.2903/j.efsa.2020.6057

Another case of a banned pesticide whose residues are permitted in food is **chlorate** [TR, Section 6.2], which is used as chlorine disinfectants in the food industry, which is most probably why it was detected in 1115 samples. Therefore, even though chlorates were banned because of their toxicity to humans and the environment, chlorate residues in food are permitted, since they occur from disinfectants used in the food industry. In fact, most of the residues were detected in food produced in Europe (Germany, Spain, UK, Italy and Netherlands) although a high percentage of asparagus from Peru and Mexico also contained chlorate residues. According to a recent analysis, chlorate is in the top 10 pesticides that European companies export to third countries for use in agriculture[13] .

Chlordecone [TR, Section 6.3], an organochlorine insecticide, POP (Persistent Organic Pollutant), classified a suspected carcinogen and banned in the EU for all these toxic properties, was detected in 928 samples, mainly in animal products of unknown origin. Since it is persistent, low residues of Chlordecone are permitted in several food products. This is highly alarming as it becomes difficult to monitor the entrance of these products in the EU. In addition, a high number of samples from Martinique and Guadalupe contained this dangerous substance, which exceeded the legal residue limits (MRLs).

Chlorfenapyr [TR, Section 6.4] is an insecticide which is highly toxic to the environment (bees, insects, birds and aquatic life) and a suspected carcinogen to humans, which was detected in 318 samples, 73% of which were imported. The MRLs for chlorfenapyr have been set below the detection limit, in all cases but tea. However, only half of the samples were teas (150) and residues in the rest of the food is considered illegal. A high percentage of teas from Vietnam (58%) and China (32%) contained chlorfenapyr, as well as chili peppers from Vietnam (55%), aubergines from Suriname (27%) and strawberries from Cyprus (23%). The latter shows that illegal use of this pesticide is taking place in Europe as well.

Malathion [TR, Section 6.5] is another organophosphate insecticide, which was classified as probably carcinogenic by IARC in 2015 (equivalent to category 1B in Europe, which should result in a ban), it is suspected to be toxic to reproduction and academic research indicates that it is also neurotoxic[14]. Moreover, it is highly toxic for the environment. Although the toxicity of malathion is recognised to an extent in Europe, and therefore its use is restricted to greenhouses only, residues are permitted in various types of food. Our research showed that malathion was detected in 201 samples in total and 86% were imported, proving that the EU imports food grown with this dangerous substance.

Anthraquinone [TR, Section 6.7] is an insecticide that was banned in Europe in 2008, it is carcinogenic and highly toxic to the environment. The MRLs were deleted and set below the limit of detection. Nevertheless, our research shows it was detected in 169 samples, mostly teas and goji berries, the majority produced outside Europe (73%), for example Sri Lanka and China. The presence of anthraquinone in these food items is illegal, and should be closely monitored.

Another pesticide that has been banned and whose residues must not be detected in food is **tricyclazole** [TR, Section 6.8], a fungicide substance used mainly in rice fields. Tricyclazole is toxic to humans and the environment: despite the fact that the MRLs have been deleted, it was nevertheless found in 142 samples, mainly rice and chili peppers, of which 60% produced in third countries and 20% in Europe (packaged and

[13] https://www.publiceye.ch/fileadmin/doc/Pestizide/202009_EU-export-pesticides_sankey_EN.pdf
[14] http://www.pananz.net/wp-content/uploads/2014/09/malathion.pdf

processed). About 50% or more of the rice or chili pepper samples from Brazil, Vietnam and India had tricyclazole, indicating the use of this toxic pesticide in these countries.

Propargite [TR, Section 6.9] is another banned insecticide, which is permitted to be detected as residues in some food products. This is because of an import tolerance request that was submitted after the pesticide was banned in Europe. Propargite is a probable human carcinogen and toxic to the environment, for which safety exposure levels could not be established by EFSA in 2011. Nevertheless, based on studies provided by the industry, in 2018 EFSA approved an import tolerance request of 10 mg/kg for teas and 4 mg/kg for oranges. Our research shows that propargite was detected in 89 food samples, the majority produced in third countries (71%), which includes only 18 tea samples and one sample of oranges. Therefore, the rest of the food (goji berries, tomatoes, chili peppers), coming from China, India, Egypt and Vietnam, were exceeding the legal limits. According to a recent analysis, propargite is among the top 10 pesticides that European companies export to third countries for use in agriculture[15]. This is a clear example where an import tolerance was given for a substance following its ban in Europe, even though human health concerns had been identified in previous assessments.

CONCLUSIONS

Our investigation demonstrates that pesticides that have been banned for use in the EU due to human health and environmental concerns, can still be detected in food sold in European market. To our surprise, although in many cases the presence of EU-banned pesticide residues in food is illegal, in some cases it is not. This means that countries that grow their food making use of these dangerous pesticide substances can still sell it to the EU (and EEA countries) and Europeans consume these pesticides via their food.

There are certain cases where the presence of certain pesticide residues in food is completely illegal (e.g. hexachlorobenzene, anthraquinone, tricyclazole).

Nevertheless, in many cases the presence of banned and hazardous pesticides in certain food items is permitted. In these cases, the MRLs were above the limit of detection because:

- They were not deleted following the ban (e.g. carbendazim, malathion) or were kept for certain products (e.g. omethoate, chlorfenapyr)
- They were adjusted to above the level of detection due to secondary contamination other than use as pesticides (e.g. chlorates)
- They were adjusted to background exposure due to persistent pesticides in the environment that accumulate in meat products (e.g. DDT, chlordecone)
- They were set above the limit of detection following an import tolerance request (e.g. propargite)

Unfortunately, residues of all these banned pesticides were detected in food grown in the EU, revealing that these pesticides may have also been used in Europe against the law, and have had a negative impact on human health and environment.

[15] https://www.publiceye.ch/fileadmin/doc/Pestizide/202009_EU-export-pesticides_sankey_EN.pdf

In all these cases, if residues are permitted in food, the EU is implicitly giving its consent for these dangerous substances to be used in third countries making it even more difficult to control the illegal use of pesticide in Europe.

PRESSURES FROM THE INTERNATIONAL AGRICULTURAL LOBBY

In the EU, according to EC 1107/2009, pesticide substances that do not comply with certain hazard-based health and environmental approval criteria[16] (cut-off criteria) must not be authorised for pesticide use, with very limited exceptions. This element of the Regulation was introduced to lead to a quick non-renewal decision for the substance without assessing further other toxicity factors. All products that contain such a substance should be removed from the market and according to MRL Regulation, if the authorisation of a substance is revoked, the MRLs may be modified or deleted without and further assessment by EFSA [Article 17, MRL Reg 396/2005].

The MRL Regulation 936/2005, however, which was adopted before EC 1107/2009 is based on risk assessment, leaving it open to examine the level of exposure even when a substance is highly hazardous. Therefore, an import tolerance could still be requested for substances that meet the cut-off criteria and the subsequent risk assessment could conclude, that no risk for humans has been identified, granting the import tolerances.

The Commission receives continuous complaints by WTO trade partners raising concerns that the non-approval decisions for pesticide substances must be risk-based[17]. In fact, according to the evaluation the pesticide and MRL Regulations (REFIT), between 2015 and 2017, non-EU countries in the WTO Committees raised specific trade concerns on pesticides 208 times against the EU[18]. This is absurd, considering that only 3 substances have been banned in Europe that meet the cut-off criteria, and in all the cases there have been other toxicity issues identified during risk assessment too. An import tolerance request for a substance that meets the human health cut-off criteria, should be rejected following risk assessment. But why spend public funds to establish safe levels for a substance that has already been identified as highly toxic? WTO countries and pesticide corporations have put immense pressure on the European Commission to weaken its approach and accept that a risk assessment must be carried out even for these substances.[19] Therefore, the back door for to sell to Europe food products grown with the use of dangerous substances remains open.

For substances which present no human health concern for consumers (e.g. health cut-off criteria) but are still banned (either because they do not comply with the environmental cut-off criteria or for other human and environmental toxicity factors), the MRLs are not all deleted, provided they are judged safe for EU consumers. MRLs corresponding to Codex Alimentarius (international standards) based on uses in non-EU countries and

[16] These are set out in Annex II, points 3.6.2 to 3.6.5 (human health), to Regulation (EC) No 1107/2009: substances shall be approved as active substances in plant protection products (PPPs) if they are not classified as mutagen, carcinogen or toxic for reproduction category 1A or 1B or having endocrine disrupting properties save for certain limited derogation possibilities and point 3.7 (environment) if they are not classified as persistent organic pollutant (POP), persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative substance (vPvB)
[17] World Trade Organisation, Council for trade in Goods, July 2019. Agenda item 8.
[18] Commission Staff Working Document, REFIT evaluation of Pesticide (EC) 1107/2009 and MRL 396/2005 Regulations https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0087
[19] https://corporateeurope.org/en/2020/02/toxic-residues-through-back-door

MRLs that had been specifically set as import tolerances will remain, as it is assumed that they pose no threat to consumers. Evidently, the impact on local communities and the environment where these pesticides are used is completely ignored. That is why in our research, for some substances MRLs were not deleted after the ban (e.g. chlorfenapyr, omethoate), even though concerns for consumers have not been overruled.

The shortfalls of the current pesticide risk assessment procedure (that may result in undermining the toxicity potential of pesticide substances and lead to wrong classification) are covered elsewhere and are not discussed here.[20]

However, it is PAN Europe's position that, if a substance has been banned in the EU due to human health and/or environmental concerns, whether it meets the cut-off criteria or not, it should not be supported for use in third countries. The EU giving its consent to poison human health and the environment elsewhere is unacceptable, against human rights, and also exposes EU farmers to unfair competition.

THE EUROPEAN GREEN DEAL- A POLITICAL OPPORTUNITY

With the European Green Deal (EGD), the EU has put climate change and the protection of biodiversity at the forefront of the European Policy. The Farm to Fork (F2F) strategy, which is at the heart of the EGD, calls for a shift to sustainable food systems and for turning sustainability into a trademark, an economic opportunity.[21] F2F clearly recognises the impact pesticides have on the environment and biodiversity; furthermore the Commission has committed, in theory, to reduce the overall use and risk of chemical pesticides by 50% and the use of more hazardous pesticides by 50% by 2030, as well as to promote safer alternatives for pest management in order to reduce dependency from chemical pesticides.

The EU has now committed to support a global transition to sustainable agri-food systems and set up a trade policy that supports its ecological transition. It has promised to promote international standards that encourage sustainable agriculture and seek commitment by third countries, including in relation to the use of pesticides.

In relation to imported food, the Commission has committed to take into account environmental aspects as well when assessing the import tolerance request for pesticides no longer approved in the EU, and will review all current import tolerances for substances. Moreover, the European Commissioner of agriculture stated that "the European Union should stop importing agricultural goods made using pesticides that are banned within the bloc".[22]

In the Commission's evaluation of Pesticide and MRL Regulations (REFIT), it was highlighted that the Commission will reflect on ways to consider environmental aspects when assessing requests for import tolerances for substances no longer approved in the EU.[23] The Commission has committed to use "green diplomacy" to

[20] Robinson, C. et al (2020). Achieving a High Level of Protection from Pesticides in Europe: Problems with the Current Risk Assessment Procedure and Solutions. European Journal of Risk Regulation, 11(3), 450-480. doi:10.1017/err.2020.18
[21] Farm to fork Strategy under the European Green Deal; https://ec.europa.eu/food/farm2fork_en
[22] https://www.reuters.com/article/us-eu-agriculture-pesticides-idUSKBN2432SC
[23] European Commission's report on the Evaluation of Regulation (EC) No 1107/2009 on the placing of plant protection products on the market and of Regulation (EC) No 396/2005 on maximum residue levels of pesticides https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0208

promote the EU green agenda on pesticides and more specifically "to promote the phasing-out, as far as possible, of the use of pesticides no longer approved in the EU and to promote low-risk substances and alternatives to pesticides globally".

RECOMMENDATIONS

Based on our research and following the objectives of the European Green Deal and Farm to fork with the European Union leading on global sustainable food systems, we propose the following:

- **Set a trade policy that:**
  - **prohibits EU production and export of pesticides that have been banned in the EU for health and environmental reasons – follow the French example.**
  - **prohibits the importation of food containing residues of pesticides that have been banned in the EU or severely restricted due to harmful effects on human or animal health or unacceptable effects on the environment. This requires to:**
    - **Amend the MRL Regulation to reject import tolerances for pesticides that have been banned in EU for human health or environmental reasons.**
    - **Amend the MRL Regulation to be able to delete all MRLs (including Codex and past import tolerances) following a revocation of authorization of a pesticide due to human health or environmental concerns.**
    - **Amend the MRL Regulation to clarify that for substances that are banned due to human health or environmental concerns the MRLs must be deleted, without further assessment by EFSA.**
  - **Enforces a zero-tolerance policy for banned pesticides in food and proceed to sanctions for food that exceeds the safety limits of residues of pesticides in food.**
  - **Strongly advocates and pushes for a global agreement to end all production and use of Highly Hazardous Pesticides**
- **Incorporate an additional safety factor in consumer risk assessment to address pesticide mixtures in food**

ANNEX

Analysis of pesticides detected in food sold in the EU market that are banned in EU but European companies export them to third countries.

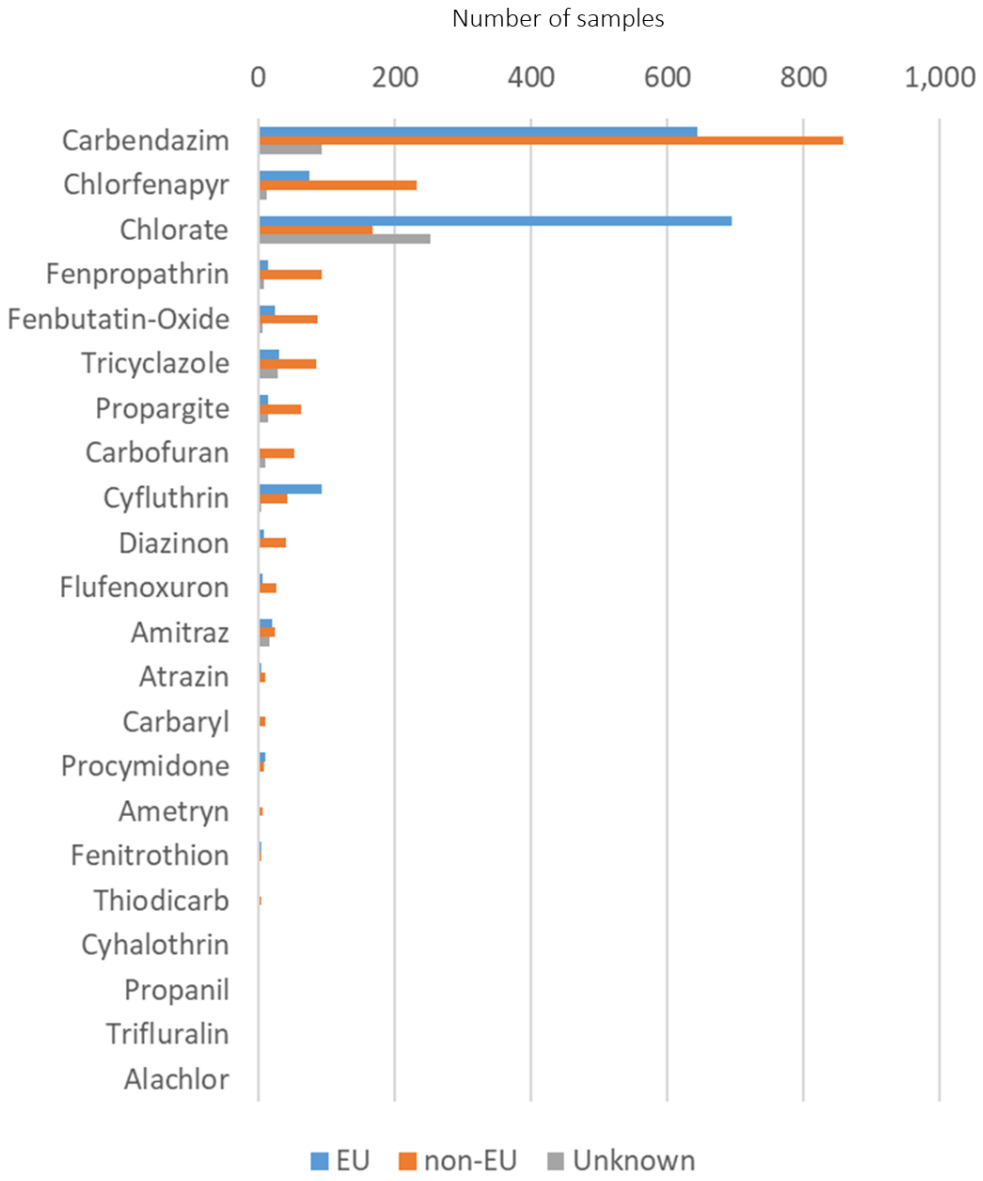

Figure 1. EU-banned pesticides that were detected in EU food and are also sold by European companies to third countries (comparison was made with the data from Public Eye and Greenpeace Unearthed investigation)

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