Pesticides in cocoa production

Highly hazardous for cocoa farmers and the environment

Photo: INKOTA

In many countries in the Global North, chocolate is a sweet delight for consumers. But what you can neither see nor taste in chocolate is that highly dangerous pesticides are used in the cultivation of cocoa on the majority of farms in the two main producing countries Ghana and Cote d'Ivoire – with harmful effects for humans and the environment.

In West Africa, cocoa is mainly grown as a monoculture with only a few shade plants. Diseases and pests caused by insects (e.g. mirids, cocoa pod borers) and fungal diseases (e.g. black pod rot) can spread quickly in the dense rows of trees and result in massive crop losses. The Swollen Shoot Virus is particularly feared. This disease is transmitted by aphids and is particularly widespread in Ghana and Côte d'Ivoire.

Increasing pesticide use in West Africa

Even though the use of pesticides in Africa is lower than in Europe and North America in a global comparison, it has increased by over 70 percent on the continent within the last two decades[1]. This trend can also be observed in cocoa farming in West Africa. In Côte d'Ivoire and Ghana, a 2020 study estimates that 77 percent of cocoa farming families use pesticides – an increase of over 20 percent between 2014 and 2019[2]. In Ghana, pesticide use is a central component of national agricultural policy. Since 2001, state-organised pesticide sprayers in the Cocoa Disease and Pest Control Program (CODAPEC) have been spraying pesticides free of charge on smallholder cocoa farms – sometimes with entire groups of state-paid workers on the farms. Between 2003 and 2011, the number of approved pesticides in Ghana increased tenfold[3].

Highly dangerous pesticides in cocoa cultivation

The pesticides most commonly used in West African cocoa farming belong to the group of insecticides. Herbicides and fungicides are also used. Insecticides are used against insects, while herbicides are effective against weeds and fungicides against fungal diseases. A closer look at the active ingredients used reveals an alarming fact: the vast majority of pesticides used in cocoa production are classified as highly hazardous by the Pesticide Action Network (PAN) (see info box) and are banned or no longer approved for use in the European Union (EU) due to their serious effects on health and the environment. In Côte d'Ivoire and Ghana, however, most of the active substances are still permitted.

The main insecticides used are neonicotinoids (thiamethoxam, thiacloprid, acetamiprid and imidacloprid) and pyrethroids (bifenthrin, cypermethrin, deltamethrin and lambda-cyhalothrin), organophosphates (chlorpyrifos) and the highly controversial herbicide glyphosate. Scientific studies have also found residues of aldrin, lindane and endosulfan in cocoa beans – active substances that are on the banned lists of international agreements such as the Stockholm Convention on Persistent Organic Pollutants.

Weak regulations in producing countries, a lack of training in the use of pesticides and language barriers regarding product labels and instructions for use lead to the improper application of pesticides or use of unauthorised active ingredients[4] by cocoa farmers. The World Bank estimates that up to 40 percent of the pesticides used in Côte d'Ivoire enter the country illegally. A survey of Ivorian cocoa farmers revealed that 96 percent of respondents dispose of empty containers in nature and 55 percent store pesticides in their homes for easy access[5]. Women are also particularly vulnerable to the various hazards of pesticide use, as they are less likely to be trained in correct pesticide use and their often lower levels of formal education make it difficult, for example, to read labels with instructions for use[6].

Highly dangerous pesticides

Highly hazardous pesticides (HHPs) are those that are "particularly hazardous to human health, animals and the environment or cause severe or irreversible damage to health or the environment under the conditions of use". These include pesticides that, for example, cause cancer, alter genetic material, damage reproduction, are acutely toxic, harmful to hormones or highly hazardous to bees.

The Pesticide Action Network (PAN) has been publishing a list of highly hazardous pesticides since 2009. It is constantly updated and currently lists over 300 active substances.

Serious consequences for health and the environment

Given the structural poverty in which most cocoa farmers live, they are particularly vulnerable to the harmful effects of highly hazardous pesticides. Their incomes are often so low that they cannot afford the necessary protective equipment such as gloves, goggles or boots. The active ingredients used in cocoa farming can cause both acute poisoning and chronic health effects. Without adequate protective equipment, cocoa farmers are directly exposed to these risks. These substances are also dangerous for people living in the vicinity of cocoa plantations.

When they come into contact with the skin or eyes, neonicotinoids can cause acute symptoms of poisoning such as dizziness or vomiting. They are also suspected of causing chronic health damage. In unborn babies and children, neonicotinoids can damage the developing nervous system. In the case of pyrethroids and organophosphates, there is also a connection between pregnant women's contact with these substances and later behavioural problems and developmental disorders in their children. Active substances such as endosulfan or aldrin are suspected of causing cancer.

You can't tell by looking at the chocolate, but the cocoa in it is often sprayed with highly hazardous pesticides. photo: Pixelio

Although there is no systematic record of the negative health consequences of pesticide use, they are documented by numerous surveys conducted with producers. In a study published by Ghanaian and European scientists, among others, as many as 100 percent of the respondents reported headaches, burning eyes and skin rashes after the application of pesticides[7].

Highly hazardous pesticides also damage soils, poison water bodies and destroy biodiversity. They thus pose an existential threat to the entire ecosystems in which cocoa is grown because, for example, pollination, nutrient supply and natural pest control are disrupted. This leads to increased pest infestations and insect mortality, which in turn has a negative impact on cocoa crop yields[8]. In 2018, PAN investigations in Ghana found widespread pollution of drinking water sources and rivers by wastewater from cocoa plantations.

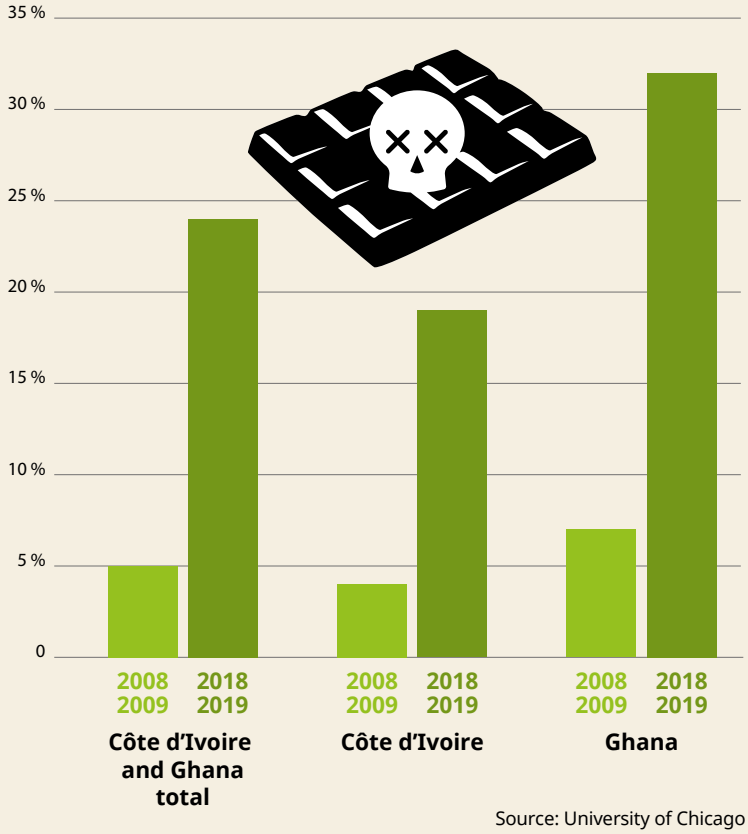
Child labour and the danger of highly hazardous pesticides

Around 1.5 million children work on cocoa plantations in West Africa today, as many cocoa farmers cannot afford paid harvest workers due to their low income. They are thus forced to rely on the free labour of their children. Data from a study on child labour in the cocoa sector commissioned by the US Department of Labor show that the increasing use of pesticides in cocoa farming is also increasingly endangering the health of these children.

The study results are shocking. Overall, the proportion of children exposed to pesticides in cocoa farming has almost quintupled in ten years.

This development is alarming due to the negative effects of pesticides on children's health, as the pesticides used are suspected of causing developmental disorders in children and damaging female reproductive organs, for example. Moreover, even the smallest amounts are highly toxic for children.

% of children working on cocoa plantations (1.5 million) exposed to pesticides



Source: University of Chicago (2020)

Lack of transparency of cocoa and chocolate companies

So far, the steadily increasing use of pesticides, many of which are highly hazardous, has hardly received any attention in the expert discussions on sustainable cocoa. In the sustainability reports of large cocoa and chocolate companies, there are no statements on how the negative health and environmental impacts of pesticide use in their supply chains are to be countered. So far, no company has published systematic documentation on which pesticides are used in its own supply chain. Instead, in their sustainability programmes, the corporations rely on productivity-enhancing measures that also include the use of pesticides for pest control. The lack of regulation of active ingredients in cocoa-growing countries makes exporting to West Africa even more lucrative for large European pesticide manufacturers. Neonicotinoids have been banned in the EU since 2018 due to their great danger to bees – but are still exported to Côte d'Ivoire and Ghana by companies like Bayer[9].

In the context of the Supply Chain Due Diligence Act in Germany and upcoming EU regulations on human rights and environmental due diligence, neither companies nor national governments can continue to ignore the dangers of pesticide use.

Ending highly hazardous pesticides is possible

The excessive use of highly hazardous pesticides is the result of a lack of regulation in growing and consuming countries, low investment in alternative cultivation and pest control methods, the influence of pesticide manufacturers on the risk assessment of active ingredients and the predominance of cocoa cultivation in monocultures. But their use can be replaced by various alternative methods. Rainforest Alliance and Fairtrade, for example, prohibit the use of almost all highly hazardous pesticides in cocoa farming in their certification schemes. However, there is no public data on the use of pesticides by certified cooperatives.

A frequently mentioned alternative to the high use of pesticides is Integrated Pest Management (IPM), in which the use of pesticides is to be kept to a necessary minimum by considering biological and crop-specific cultivation measures. However, the definition of IPM is not uniformly defined and is therefore often not applied consistently.

Organic cocoa comes without pesticides

Organic cocoa farming, on the other hand, does not require the use of chemical pesticides. The cocoa is often grown in agroforestry systems with a variety of shade trees and other crops. This supports natural pest control, increases soil fertility and provides a habitat for important pollinating insects. Diseases and pests are controlled by biological pesticides. This reduces risks to health and the environment and provides higher incomes, as higher prices are paid for organic cocoa.

Organic farming can also be understood as part of an agroecological approach. Here, soil, plants and animals are understood as a common ecosystem that must be coordinated with each other, and synthetic pesticides are not used at all. This approach also puts the rights and needs of the producers in the foreground. However, organic cocoa production currently accounts for less than three percent of global production. To convert to organic farming systems, cocoa farmers need financial support and access to the necessary means of production such as organic seeds and organic pesticides.

What needs to be done?

Cocoa and chocolate companies must:

- **Disclose which pesticides and pesticide levels are used in their supply chains and how they monitor their use.**
- **End the use of highly hazardous pesticides in their supply chains by 2025.**
- **Pay fair cocoa prices that provide a living income so that cocoa farmers can afford health and safety measures such as protective clothing and proper storage facilities for pesticide containers.**
- **Promote the transition from conventional to organic cocoa farming and support agroecological approaches in their sustainability programmes.**

Governments in cocoa consuming countries and the EU must:

- **Stop the export of pesticides banned in the EU to end their use end their use on cocoa farms.**
- **End the use of highly hazardous pesticides in government-funded projects.**
- **Increase financial support for agroecological approaches in government-funded projects in the cocoa sector.**

Governments in cocoa producing countries must:

- **Develop time-bound policy plans to ban the importation, marketing and distribution of highly hazardous pesticides.**
- **Improve surveillance and monitoring activities to end the use of unapproved pesticides.**
- **Provide a policy framework and investment support for integrated pest management and agroecological approaches to boost the production of organic pesticides and enhance the socioecological health of cocoa growing landscapes.**

Further INKOTA information:

- Double Standards and Hazardous Pesticides from Bayer and BASF
- Cocoa Barometer 2020
- Assessment on Gender Dynamic of Highly Hazardous Pesticides with Cocoa Production Landscape in Ghana

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[1] Heinrich Böll Foundation, PAN Germany & BUND (2022). https://www.boell.de/sites/default/files/2022-01/Boell-Pestizidatlas-2022.pdf?dimension1=ds_pestizidatlas22
[2] Sadhu, S. et al. (2020). https://www.norc.org/PDFs/Cocoa%20Report/NORC%202020%20Cocoa%20Report_English.pdf
[3] Kwakye, M.O. et al. (2018). https://doi.org/10.1007/s10668-018-0154-7
[4] Denkyirah, E. et al. (2016). https://doi.org/10.1186/s40064-016-2779-z
[5] Martin, S.Y. et al. (2018). http://dx.doi.org/10.19044/esj.2018.v14n33p267
[6] Osei-Owusu, Y. & Owusu-Achiaw, R. (2021). https://webshop.inkota.de/node/1653
[7] Kwakye, M.O. et al. (2018). https://doi.org/10.1007/s10668-018-0154-7
[8] Claus et al. (2018). http://dx.doi.org/10.5772/intechopen.75361
[9] Public Eye (2021). https://www.publiceye.ch/de/themen/pestizide/die-eu-exportiert-mehrere-tausend-tonnen-bienenkiller-die-auf-ihrem-boden-verboten-sind

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