

PESTICIDE NEWS

The Journal of Pesticide Action Network UK

An international perspective on the health and environmental effects of pesticides



ETHIOPIA'S FIRST CERTIFIED ORGANIC COTTON

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Ethiopia's first certified organic cotton farmers

Project success as 200 Ethiopian farmers become the first to produce certified organic cotton in the country

Since 2013, with financial support from TRAIID and in collaboration with PAN-Ethiopia, our project in southern Ethiopia has provided training for over 2000 smallholder cotton farmers.

Training in our Farmer Field Schools demonstrates the benefits of good crop husbandry, Integrated Pest Management (IPM) techniques and soil improvement without the use of expensive and hazardous pesticides. On the 26th December 2017, 200 of these farmers gained organic cotton certification – the first in the country!

Heavy pesticide use has led to serious impacts on health and the environment. Globally, nearly one thousand people are estimated to die every day from acute pesticide poisoning. Many more suffer from chronic ill health, including cancers, neurological diseases and infertility. The majority of fatalities and ill health is experienced by farmers in developing countries where regulation is weaker and protective equipment is less available.

By learning to farm sustainably farmers in Ethiopia are achieving higher yields and experiencing fewer health problems. In addition, bees and insects are starting to return to their fields, bringing the whole ecosystem back into balance and opening up other sources of income, including the sale of honey.

Organic cotton production requires confident, well-trained farmers who have gained crop and pest management and

problem-solving skills. By working with PAN, our farmers are now achieving yields over 100% higher than untrained farmers in the same area and the price obtained per kg of cotton has increased by 77%.

We're very proud of the hard work undertaken by everyone involved in this project and look forward to seeing more of our farmers reaching organic accreditation. We would like to see big brands supporting farmers in these initiatives and encourage the general public to buy organic cotton whenever possible.

"The farmers involved have made the most of the training provided. It is to their credit and the brilliant team in Ethiopia that they are the very first in the country to secure organic accreditation for cotton.

We anticipate that this will bring them new opportunities to market their high-quality product. The Ethiopian Ministry of Agriculture and the local agricultural departments in the project area has been very supportive of this initiative and we look forward to working closely with their extension services to share experience with many more farmers in future."

Sheila Willis,
Head of International Programmes, PAN UK

Cover image courtesy of PAN-Ethiopia



Dow DuPont: A contamination legacy



Over the past few years, plans have been afoot for the world's largest chemical companies to merge into giant, new mega-corporations. Among the markets they seek to control, through these manoeuvres, is the supply of food where sterile crops grown in barren landscapes will be soaked in their toxic pesticides.

At the end of August 2017, Dow Chemical merged with DuPont to create one of these hideous juggernauts and the world's largest chemical company was formed. To receive regulatory approval for the merger, both companies were required to divest certain items within their respective portfolios - crop protection, in the case of DuPont and ethylene acrylic acid copolymers and ionomers for Dow- but only to satisfy 'anti-trust' issues with regard to competition within their markets. Approval for the merger

was thus granted in spite of accusations that the companies had not been open about vast liabilities connected with their respective contamination legacies.¹

After announcing the merger, both companies were accused of withholding critical information from shareholders regarding Bhopal Disaster related liabilities pending against Dow subsidiary Union Carbide. But, unresolved claims in the forthcoming 'curative' civil petition alone, aiming to address inadequacies within a controversial 1989 civil settlement of the disaster², amount to several billion dollars over Carbide's total book value. In addition, the outstanding criminal manslaughter case has the potential for fines and penalties with no upper limit and Dow has been summoned on five occasions to explain why Union Carbide has never attended court to face the charges.³

Dow DuPont: A contamination legacy

In the case of DuPont, C8 (or PFOA), a toxin used in the manufacture of Teflon remains a major issue despite DuPont making a \$670.7 million offer, pre-merger, to settle C8 lawsuits connected with contamination emanating from its Washington Works plant in West Virginia. This settlement, if agreed, would include three cases previously tried in a federal court which each received awards running in to the millions of dollars. This makes the \$670m proposed settlement look an

extremely paltry amount given the 3,500 cases in the class action seeking damages.

Elsewhere, there are known to be serious issues with C-8 contamination around the US, as well as in the Netherlands, Korea, Australia and other countries. In fact, C8 contaminates every continent and country on the globe, and has been detected in the Pacific Ocean and other bodies of water⁴, where the largest concentrations are in the top surface levels. continued...

HISTORY: Abandoned Union Carbide Pesticide Plant, Bhopal, India

A gas leak from a Union Carbide pesticide plant in Bhopal, India saw the beginning of the worst industrial disaster in history. It has come to be known as the Hiroshima of the chemical industry. 40 tonnes of deadly methyl isocyanate gas, used in the manufacture of the pesticide Sevin, spewed from the plant into the surrounding areas.

8-10,000 people died within the first 72 hours and another 15,000 people have died as a result of their exposure to the gas. Another 120,000 have chronic medical conditions that require constant healthcare.

(For comparison, Chernobyl is estimated to have caused 57 direct deaths, with some 4,000 additional deaths from cancer).

The disaster site was never cleared of its toxic waste. The environment, all around the factory, is heavily contaminated and the toxins have now leached in to the drinking water aquifer. An estimated 25,000 people have no other regular source of drinking water and are forced to drink this water contaminated with toxic chemicals.

[The Bhopal Medical Appeal](#) funds the Sambhavna Clinic, the only place to offer free treatment to anybody affected by the toxic gas or water.



The, now abandoned, tank which leaked deadly methyl isocyanate gas during the worst industrial disaster in history.

© Giles Clarke, Getty Images

Dow DuPont: A contamination legacy

Worse still, recently emerging stories suggest that, once DuPont finished using C-8, it moved on to another toxic chemical, known as GenX, and continued dumping it in rivers⁵. Little data exists on the health effects of GenX, but scientists who have reviewed the few studies available say it may pose many of the same risks as C8.⁶

After the Dow Dupont merger, the new company will be split into three and there is real concern as to where the Bhopal and C8 liabilities will lie. In so far as Dow and Bhopal is concerned, Dow has contrived to maintain a corporate veil between itself and Union Carbide as its chief protection from Carbide's liabilities- although even that has come into question after the Chief Judicial Magistrate in Bhopal summonsed Dow Directly. But, there has been no statement from Dow as to what form Union Carbide may take, nor where it may sit among the three new entities, and this would only seem to suggest further complication before Union Carbide is ever held to account for its actions.

Despite being omitted from all regulatory merger filings, the Bhopal legacy remains an acute source of concern for DowDuPont stockholders, who last month submitted three separate shareholder resolutions seeking transparency on Bhopal. Filed for inclusion upon the ballot of the company's inaugural AGM in spring 2018, the resolutions challenge management on non-disclosure of legal risks from pending Bhopal liabilities and request that management provide objective metrics and analysis describing the legal and reputational impacts of Bhopal upon investment in India, whose chemical

sector is predicted to be worth \$403 billion by 2025.

References:

¹ For clarification and supporting documentation on attempts to conceal contamination legacies see: <http://bhopal.org/toxic-merger-update/>

Bhopal Medical Appeal letter to EU competition commissioner outlines apparent attempts by both companies to evade liabilities: <http://bhopal.org/eu-anticompetition-investigation/>

Further detail on Dow's Bhopal liabilities and DuPont's C8 liabilities: <http://bhopal.org/the-toxic-merger-of-dow-and-dupont/>

² A \$470m settlement of the Bhopal Disaster was made in 1989 which Dow Chemical continues to maintain was 'full and final' despite being made using incorrect figures for the dead and injured. Furthermore, the 'settlement' did not take into account later illness and birth defects nor make any concession to environmental contamination.

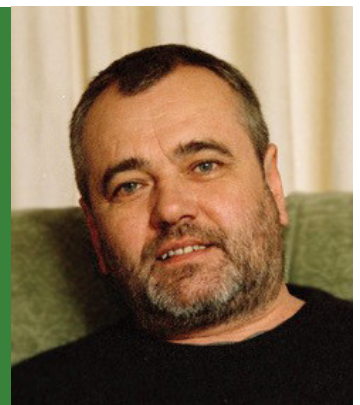
³ The Dow Chemical Company's Bhopal Related Legal Liabilities: <http://bhopal.org/the-dow-chemical-companys-bhopal-related-legal-liabilities/>

⁴ <https://oceanbites.org/perfluorooctanoic-acid-pfoa-entering-deeper-ocean-via-vertical-eddy-diffusion/>

⁵ <http://www.starnewsonline.com/news/20170615/chemours-genx-polluting-cape-fear-since-1980>

⁶ <https://theintercept.com/2016/03/03/new-teflon-toxin-causes-cancer-in-lab-animals/>

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Glyphosate: A victory for corporate lobbying, not science

by Josie Cohen, Head of Policy and Campaigns, PAN UK

In November 2017, EU member States narrowly voted for a five-year reauthorisation of glyphosate, the world's most widely used weedkiller. While this is far from the fifteen-year license the agrochemical industry was pushing for, the result was a major disappointment to PAN and other organisations campaigning to protect the environment and human health from the harmful impacts of pesticides. It was also a slap in the face to the millions of European citizens who signed petitions calling for glyphosate to be banned.

Straight after the vote, the pro-glyphosate PR machine went into overdrive declaring the decision 'a major victory for science and common sense' over supposedly dishonest and uninformed environmentalists. The petrifying thing about this false narrative – fostered successfully for decades by the agrochemical industry – is that it is winning.

I thought it was high time to challenge some of the key claims being bandied about:

Myth 1: The campaign against glyphosate isn't based on scientific evidence



PAN's work on glyphosate is far from what the industry lobby would have you believe. In 2016, we published our [Glyphosate Monograph](#), a review of more than 400 independent, peer-reviewed scientific studies looking at the human health and environmental impacts of glyphosate. This review of all the available science revealed that long-term exposure to glyphosate is harmful to human health in a whole range of ways and can cause conditions such as kidney and liver disease, act as an endocrine and immune system

disrupter, and result in reproductive and neurological problems. It also clearly showed that glyphosate was driving negative environmental impacts to water, soil, flora and fauna, including bees, birds, amphibians and beneficial insects such as earthworms.

For PAN, it's not enough to campaign for a ban on a substance like glyphosate without also helping farmers make the switch to healthier, greener forms of weed control. As an organisation, we pride ourselves on not just focusing on the problems with pesticides but also promoting genuinely sustainable alternatives. That's why, earlier this year, we launched a long, detailed report outlining [alternatives to glyphosate](#) and other herbicides in weed control.

Despite these evidence-based, nuanced contributions to the debate, we are still accused of being unscientific and attempting to halt the advancement of progress.

Glyphosate: A victory for corporate lobbying, not science

Myth 2: Farmers need glyphosate



The agrochemical and industrial farming lobbies claim that without glyphosate agricultural yields would plummet, forcing the entire sector into an economic downward spiral and leading to widespread food insecurity. However, this argument has repeatedly been shown to be false. For one thing, the claims about the yields glyphosate is able to deliver are often overblown. Since 1990 the amount of glyphosate used on UK cereals has risen by 686%, while yields have only increased by around 20%. In addition, there is a huge body of evidence showing that agro-ecological techniques are able to produce sufficient amounts of food without pesticides.

Many farmers also believe that glyphosate helps them to better protect the environment. They argue that, without it, they would be forced to abandon more sustainable practices like no-tillage leading to more soil health erosion and higher carbon emissions. However, recent studies show that when reduced-tillage (rather than no-tillage) is combined with the use of green manure to raise nitrogen levels, crop yields can be comparable to those grown with glyphosate, while soil fertility and carbon storage capacity is maintained.

For detailed information on other alternatives to glyphosate please see our report which promotes an Integrated Weed Management

approach involving a suite of different approaches and shows how farmers can stop using glyphosate and still remain profitable.

Myth 3: A precautionary approach inhibits progress and innovation



“The withdrawal of pesticides will incentivize innovations, including changes to the crops grown, cultivation methods, and new types of pesticides.”

– Professor Ian Boyd, Chief Scientific Advisor to DEFRA, September 2017

Mainstream agriculture relies heavily on pesticides and you can see why. They are a silver bullet to farmers’ pest problems, and none more so than glyphosate which can be used to kill almost any weed with little labour or agricultural knowledge required. Trouble is that the over-dependence on glyphosate is stunting research and development into less damaging alternatives. Why pour time and money into developing agro-ecological alternatives which are more complicated to deploy when you have a miracle chemical that the companies and regulators tell you is perfectly safe?

Only once a substance is due to be phased out do healthier, greener alternatives begin to emerge. If the EU had decided to phase out glyphosate gradually, as [proposed by the European Parliament](#), then the next five years would have seen a boom in investment into alternatives.

Glyphosate: A victory for corporate lobbying, not science

As it is, the agriculture sector will continue to rely on glyphosate and gear up for a new fight to save it in 2022.

Organisations such as the NFU which claim to represent the interests of farmers, would better serve their constituency by promoting investment into genuinely sustainable alternatives to pesticides rather than fighting tooth and nail to keep one ultimately-doomed chemical at a time.

Myth 4: We can trust regulators' assessment of glyphosate as safe for humans



“Political will is needed to re-evaluate and challenge the vested interests, incentives and power relations that keep industrial agrochemical-dependent farming in place... Corporate influence over public policy must be challenged if we are to move away from pesticide-reliant industrial food systems”

– Report of the Special Rapporteur on the Right to Food, March 2017

Much has been written about how the agrochemical industry manipulates the system to ensure that lawmakers prioritise corporate profit over human health or protecting the environment. Strategies used by pesticide companies to keep products on the shelves are often compared to those employed by the tobacco industry and include; conducting public relations campaigns (see [#glyphosateisvital](#)), buying scientific and other expertise to create controversy about

established facts, attacking and [undermining scientists who advocate for restrictions](#), and hiring lobbyists to influence policy.

The battle to relicence glyphosate sadly appears to have been no different;

- The assessments from the three European authorities which have testified that glyphosate is not carcinogenic (the German Federal Institute for Risk Assessment, the European Food Safety Authority, and the European Chemicals Agency) have all been shown to be [deeply flawed](#).
- Members of the European Parliament have, to no avail, been attempting to [access the documents](#) upon which the European Food and Safety Authority based its ruling that glyphosate is not carcinogenic for more than a year. Turns out the studies EFSA used were conducted by the pesticide companies themselves and EFSA claims that they can't be released to the public because they are commercially confidential.
- Large swathes of a key EFSA report upon which they based their classification of glyphosate as 'safe', was found to have been copied and pasted directly from a document submitted by the pesticide industry.
- Following the decision, ninety-six independent scientists from around the world wrote [an open letter](#) to the European Commission, urging it to reject the EFSA's findings because they “do not reflect the available science.”

Considering the vast sums of money to be made from sales of glyphosate-based products, the opacity of the authorisation process and the agrochemical industry's history of manipulating scientific evidence to protect their profits, one has to question the conflict of interest built into our current system and ask whether it is fit for purpose.

Glyphosate: A victory for corporate lobbying, not science

Myth 5: Anti-pesticide groups are as well-funded as the agrochemical industry



In an attempt to discredit us further, there have been increasing attacks against PAN and other groups campaigning against glyphosate claiming that we spend as much as the agrochemical industry on lobbying. This is, frankly, laughable.

[PAN UK](#) and [PAN Europe's](#) combined annual budgets total less than £800,000 and that covers everything we do including staff salaries, office rent and a large chunk that goes directly to PAN UK's projects with farmers in poor countries. PAN staff do have meetings with decision-makers as part of their job but we don't spend a penny on external lobbyists. Even if we wanted to we wouldn't have the cash! In contrast, according to the EU's transparency register, in 2016 the biggest agrochemical companies spent €9.2 million lobbying the EU. That same year,

the gross [income of Monsanto](#) – just one of the big six pesticide manufacturers – was reported to be over US\$7 billion (around £5.2 billion). That's 6,500 times the annual budget of PAN UK and PAN Europe combined!

What's next?

On 7th December, Members of the European Parliament (the Greens/EFA group) [started the process](#) to refer the decision to renew the licence for glyphosate to the European Court of Justice. They are backed by the former UN Special Rapporteur on the Right to Food, Olivier De Schutter, who has put together [an excellent report](#) explaining the six ways in which the decision violates the EU's own regulations.

But the violations are more than just procedural. By ignoring the voices of millions of European citizens, our elected representatives in the European Parliament, and vast swathes of the scientific community, by choosing to rely on studies from the very companies due to make billions of dollars from the re-licensing of glyphosate and then refusing to release those studies, this decision undermines the democratic nature of the European Union. It also chips away at the trust that ordinary Europeans have in the ability of regulators to protect them from harm, and arguably in the European project itself.

Gove backs EU ban on neonicotinoids

UK Environment Secretary Michael Gove has announced that he will back the EU ban on bee-toxic neonicotinoids! Crucially, he also confirmed that the UK will keep these restrictions in place after it exits the EU. This will provide much-needed respite for the UK's bees and other pollinators. However, it's not just neonicotinoids that have led to the decline in UK bee populations. Post-Brexit, we also need the government to commit to reducing overall pesticide use and supporting farmers and others using non-chemical alternatives.



Is there a Pesticide-Free Towns Campaign where you live?

Working together towards a pesticide-free future!

Our Pesticide-Free Towns Campaign has already had some amazing successes, with Glastonbury, Lewes, Wadebridge, Hammersmith & Fulham and Frensham Parish all now pesticide-free. Proving that it can be done. We have many more towns working towards the same goal. Huge congratulations to all those involved in these campaigns!

We have many supporters working across the country, educating local residents on the dangers of pesticides and asking councils to go pesticide-free.

Find out more on our new [Pesticide-Free Towns](#) web page. We will continue to add useful case studies and other helpful information to it.

If you're interested in getting involved do take a look at our new map to see if there is anyone else campaigning nearby. We'd be happy to try and connect you, so do get in touch. Alternatively, if you'd like to start your own campaign, we'd love to hear from you.

Pesticide issues are currently catching public attention. The disappointing re-licensing of glyphosate in November 2017 and the



ban on bee-toxic neonicotinoids means that pesticides are big news right now and decision-makers are starting to get the message that UK citizens are concerned.

It's vital that we keep up the pressure in 2018 and continue to work together towards a pesticide-free future!

<http://www.pan-uk.org/pesticide-free/>



New guide to gardening without pesticides



A GUIDE TO GARDENING WITHOUT PESTICIDES



Asparagus Beetle

Asparagus beetles, *Crioceris asparagi*, eat both the leaves and bark of asparagus plants. If the damage to the bark extends all the way around the stem the plant will dry up and turn brown above the damaged area. Adult asparagus beetles are 6-8 mm long and are black/blue with six yellow spots on their wing cases. The adults can survive over winter, emerging from the soil in May and June to lay black eggs on asparagus spears and foliage. Eggs are laid singly or in groups of three to eight. They hatch into grey larvae which have three sets of legs towards the head end. The larvae can grow to 10 mm in length and after about 15 days migrate down to the soil to pupate.

Both the larvae and adult insects do damage to asparagus plants. The principal damage is due to the loss of leaves which reduces the plants ability to photosynthesise. There are two generations between May and September.

To reduce the chance of an infestation

- Burn old stems at the end of the year to destroy any overwintering beetles.
- Pick insects and larvae off asparagus plants from late spring onwards.



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We've published a new guide to gardening without pesticides just in time for spring. We are a small charity and endlessly struggle to raise funds. If you can support us in any way we would really appreciate it. Find it at www.pan-uk.org

