

ELIMINATING PESTICIDES FROM YOUR COMMUNITY

A TOOLKIT AS PREPARED BY
HERBICIDE-FREE CAMPUS AND
BEYOND PESTICIDES



**BEYOND
PESTICIDES**



GUIDE TO THE TOOLKIT

This is a guide to protecting your community's schools, parks, and public spaces from the use of synthetic pesticides and herbicides. Working on this shift towards healthier campuses has been both a demanding and an unbelievably rewarding experience, and we hope this toolkit inspires and empowers you to make changes in your own community. YOU are the change we've been waiting for!

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1. GET INFORMED



What is a pesticide?

Any substance or mixture of substances intended for **preventing, destroying, repelling or mitigating any pest**. The term pesticide* encompasses herbicides, insecticides, fungicides, and various other substances used to control pests. The term 'pests' is any insect, plant, or animal that is considered undesirable. "Synthetic" or "toxic" pesticides are incompatible with organic land management.

[From the U.S. Environmental Protection Agency: What is A Pesticide?](#)

*We will use the word pesticide throughout this toolkit interchangeably with the word herbicide



What is organic?

Organic Land Care is a sustainable ecological landscaping system that **promotes and enhances biodiversity, biological cycles, and soil biological activity**. It is based on minimal use of off-site inputs and on management practices that restore, maintain, and enhance ecological harmony and beauty in urban and suburban landscapes and gardens. "Organic" means landscaping with no synthetic pesticides of any kind (insecticides, herbicides, fungicides, etc.) and with no synthetic fertilizers or soil amendments.

[From NOFA Standards for Organic Land Care](#)

Why should we be cautious of toxic pesticides?

Utilize peer-reviewed science to help bolster your own knowledge of the potential dangers and to strengthen your argument when reaching out to decision-makers. (see pages 15 for more resources)

30 Commonly Used Pesticides

Familiarize yourself with the different types of pesticides and their chemical ingredients. It is important to have an understanding of the effects that different groups of pesticides have on human, ecological, and community health.

30 Lawn Pesticides

Databases

Health effects can include cancer, reproductive and developmental harm, and respiratory diseases. **These are a few databases that have great collections of pesticide studies:**

- [Non Toxic Communities: Research](#)
- [Beyond Pesticides: Pesticide-induced Diseases database](#)

Important Vocab Ex.

- Neonicotinoids
- Pesticide Drift
- Inert Ingredients
- Active Ingredients
- Surfactants
- See page 13-14 for vocab list



GLYPHOSATE

The poster child of the pesticide problem

FAST FACTS

Uses: Nonselective herbicide for broadleaf weed and grass control on food and non-food field cropsites. It is the most commonly used herbicide in the world.

Health Concerns: Eye and skin irritant. Determined by World Health Organization in 2015 to be a "probable carcinogen." Associated with non-Hodgkin's lymphoma and breast cancer. Other ingredients in formulated products are linked to developmental abnormalities and reproductive issues. Functions as an antibiotic. [Find out more.](#)

Environmental Effects: Weed resistance due to use in genetically engineered crop production, water contamination, soil quality degradation, toxic to soil microorganisms and aquatic organisms. A source of phosphate pollution in water.

Glyphosate dominates headlines due to its widespread use and legal suits surrounding it. While it deserves attention, a focus on banning a single toxic chemical such as glyphosate leaves room for toxic replacements. **To avoid the "whack-a-mole" chemical approach, use broader terms than a single-chemical ban.** For example, "organic" naturally excludes all toxic pesticides.

RESOURCES:

IARC STUDY

CALIFORNIA
PROP 65
LABELING

TRIALS: JOHNSON,
HARDEMAN, PILLIOD V.
MONSANTO

HFC ADVISOR SPOTLIGHT: DWAYNE LEE JOHNSON

Dewayne is a father and husband. He spent several years working as a school groundskeeper for the Benicia Unified School District and developed non-Hodgkin's lymphoma. Dewayne sued Monsanto for including cancer-causing chemicals in its weed-killer product Ranger Pro and causing his cancer, as he sprayed the product frequently as a groundskeeper. Mr. Johnson won the case and was awarded \$289 million, which was later reduced to \$78 million. Bayer is appealing the decision.



2. FIND OUT WHO MAKES DECISIONS



SET UP A MEETING

- To start, you will need to find out which herbicides are sprayed on your campus. To do this, you will want to set up a meeting with your Grounds Manager or Head of Facilities/Maintenance.

ASK FOR HELP

- If you don't know who this person is or where to begin, ask **SOMEONE** who works for the school for help. It's okay if they do not have all of the answers, but insist that they connect you with someone who does, and **be persistent**.
- Chances are, you'll go through a few people in order to find who you're really looking for, but don't get discouraged. It may take you quite a bit of emailing and cold calling.

EVERY CONNECTION IS A GOOD CONNECTION!

- With every email you send, you're building a foundation of support
- Yes, it is intimidating, but we were able to have our voices heard on a campus of 42,000 students (UC Berkeley).



UC advocate Bridget meets with manager of grounds operations, two facilities managers, and organic turf expert Chip Osborne to discuss a major success: organically managed campus land.

3. COME PREPARED

Can this even be done?

Yes!



Colleges that are greatly reducing their herbicide use currently: Harvard, CU Boulder, UBC, Seattle University, Yale, UPenn, Willamette, and more. Click for full list.



Municipalities that have regulated the use of pesticides include: Carlsbad, Irvine, Sonoma County, San Juan Capistrano, South Portland (ME), San Clemente, Novato, LA County, Montgomery County and more. Click for full list.

STAY UP TO DATE!

Continuously updated list of schools and municipalities going herbicide free:

- [Non Toxic Communities list of schools](#)
- [Where is Roundup banned? \(specific to glyphosate\)](#)
- [Beyond Pesticides Map of Pesticide Reform](#)

The latest news and information about pesticides:

- [Sustainable Pulse](#)
- [Environmental Health News](#)

WHAT ARE WE WORKING TOWARDS?



Strategy Document

Look at this strategy document to understand not only how to prepare for your first meeting with decision makers, but also how to understand our position within this ask towards an herbicide-free campus and the role students play in the solution.

This is covered in the strategy document, but we want to emphasize that the shift towards **organic is your goal**. Focus on what is good about organic management as opposed to chemical-intensive, and emphasize the precautionary principle (see pages 13–14 for vocab list)



This is what we are aiming for!

4. EXPECT THE CONCERNS

It's not your job to know exactly how much the transition to organic would cost, etc, but you should be prepared to address some of their concerns and at least expect what those in charge of spraying will say and prepare a response. Here are some frequent responses you may encounter:

"We already practice Integrated Pest Management (IPM)"

IPM is supposed to mean that pesticides are used as a last resort, but there is technically nothing in place to prevent people from using pesticides as a first resort.

IPM can be greenwashing, which is a practice companies use of making a misleading or unsubstantiated claim about the environmental benefits of their product or policy.

Ask the Grounds Manager/IPM Specialist to look at the written IPM policy to see the list of approved, limited, and restricted categories of pesticides (strong IPM plans will have a list of pesticides that are banned from use).

RESOURCES ON IPM:

Marin County Parks IPM page

A GREAT example of a successful and safe IPM ordinance

Marin Annual Report

Great resources for all of the organic products used.

What is IPM? Beyond Pesticides

Get briefed on the basics.

10 Myths Behind Pesticide- Dependent Management in Schools

Read this to prepare your response!

"As long as our workers are wearing their protective gear, it is safe"

- Gear and material can malfunction (seen in the case of groundskeeper Dewayne "Lee" Johnson).
- Students/community members in the area are not wearing protective gear, and the pesticide may travel in the air and wind and affect vulnerable populations (see: pesticide drift).
- Pesticides wreak havoc on soil health, and reduce the ability of soil to be resilient and sequester carbon regardless of the impact it has on the worker
- Pesticides can leach into waterways and poison the community via drinking water.

EXPECT THE CONCERNS

"Low doses are not harmful"

Immediate toxic responses from the body after being exposed to pesticides are called acute effects. Delayed toxic responses are called chronic effects, and can take decades to show signs of cancer, brain damage, etc., and can be caused by very low doses.

While traditional toxicology assumes "the dose makes the poison" a growing body of research shows that many pesticides, called "endocrine disruptors," can mimic hormones in our body, affecting our health at infinitesimally low amounts.

Many studies have found that low levels of hormone-altering compounds are linked to: infertility, cardiovascular disease, obesity, ADHD, Autism, abnormal bone health, cancer, and other chronic diseases.

Exposure can accumulate across time, and have synergistic effects, higher toxic effects from the combination of pesticides than the effects from exposure to an individual pesticide.

RESOURCES:

Peer-reviewed
Studies

COMPARING LD50'S

Lethal dosage it takes for 50% of test animals to die

The error is comparing the LD 50 of salt/cafeine/vinegar, etc. to the LD 50 of a pesticide product active ingredients such as 2,4-D or glyphosate- this is false equivalence. The LD50 of a certain chemical doesn't tell the whole story. While its based on the level at which 50% of individuals die, other individuals not killed by exposure could nonetheless experience significant declines in health, such as harm to immune system functioning or neurodegenerative disease. This wouldn't be captured by the oversimplified concept of whether something is or isn't dead after exposure.

With chronic impacts, ongoing exposure to even low doses can also result in diseases that weaken health and make individuals more susceptible to diseases that can kill, like cancer, heart disease, asthma, nervous system disorders such as Parkinson's, autoimmune diseases such as lupus, etc.

EXPECT THE CONCERNS

"It's more dangerous to bring workers out to pick weeds on medians than to spray"



- This can be avoided if workers weed during quiet hours on the road, if there is perhaps a lane closed to provide ample buffer, or if the road is closed for a few hours all together. In the long run, it is important to keep in mind that if this worker continues to use pesticides they will not only be exposing themselves to traffic in the median but also to cancer risks later on in life. Better to take precautions where we can.
- Additionally, it might serve to point out that weeds in the median are not that big of a deal and try to work with those who create aesthetic goals of the campus to adjust these goals to allow for weeds in the median.
- Changes can be made in the way these spaces are planted to be less maintenance (mini meadow with native wildflowers, low growing native shrubs, and ground cover).
 - *Ex. At Cal, students planted native wildflowers in a traffic median plant bed.*

POST-MEETING

What to do next

If for some reason you are unable to find out which pesticides are used where, you will need to submit a public records review request at some point and ask for a pesticide usage report.



Here is the template to use when creating a Public Records Request and asking for the Pesticide Usage Report



When you finally obtain the list of pesticides used, you will need to use this PAN Pesticide Database to research the health effects in order to understand what health impacts these chemicals have and how to talk about them



If the first meeting goes poorly, still send a thank you follow up email. Refer to the strategy document to know what to include in the email.

5. Build and Maintain a Team

RECRUIT

STUDENTS

Tabling with petition, class-raps, announce in club meetings, connect with student government to build task force, announce in environmentally-related classes, reach out to friends and get them on board

PROFESSORS

It is important to engage those with expertise on human health and environmental impacts.

OTHER STAKEHOLDERS

Seek out athletes, administrators, families, dog owners, community members, and whoever else you can think of.

Find a way to bring this issue into every conversation and practice your “elevator pitch,” a 1.5 minute spiel as to why this matters! Hopefully his toolkit gives you ample ideas!

Emphasize the intersectionality of the issue to broaden the range of people you recruit. This is not just an environmental issue. It is a health issue, a social justice issue, a workers rights issue, etc.



ORGANIZE

- Keep a Google folder, membership tracker, strategy chart, and meeting notes to organize and help build your team.
- You may find it helpful to keep a spreadsheet or database of the people that you reach out to, their position, and how you were able to contact them.
- Establish regular meetings and finish those meetings by assigning action items with deadlines to those present.

7.SPREAD THE WORD

WRITE OP-EDS

Write Op-Eds for your school or local newspaper

- [UC Berkeley Example](#)
- [UC Davis Example](#)
- [UC Santa Barbara Example](#)



MAKE ART

- Make stickers/posters that bring attention to what you're doing-- people WANT to represent causes... give them something to care about.
- Find what language will target the group you're trying to attract, when speaking to people who care about cancer emphasize that link, when speaking to people who care about the environment, emphasize the degradation of soil health and the link to climate change/algae blooms etc.



HOST EVENTS

Offer film screenings, panels, or town halls. It helps to have community members (be it students, faculty, or residents) informed about your project and the current management strategies.



8. POSITIVE LANGUAGE

Focus the majority of your energy on the benefits of **herbicide-free** or **organic** as opposed to the harm of herbicides. Of course it is important to address the impacts on human and animal health, as well as environmental contamination, but make sure to emphasize the alternatives that exist (mulching, improving soil health, accepting weeds, goats, steam machine).

The book *A Precautionary Tale* emphasizes how important positive language is in order for this campaign to succeed:

*...Pia made sure that positivity was reflected. YES was everywhere. AGAINST, ANTI, and NO were nowhere to be found. The guiding rule was simple: **Focus on what you want, not what you oppose.** What could have been a campaign against pesticides became a clarion call for a pesticide-free future.*





9. KEY LEARNINGS

- Groundskeepers are your allies, continue to work **WITH** them rather than trying to work against them. Ultimately they are the ones who will have to change their practices, so it is important to treat them with **respect** at every step of the process.
- Other organizations exist to **support** your work: Food and Water Watch, Pesticide Action Network, Beyond Pesticides, Non Toxic Communities, Parents for a Safer Environment, Moms Across America, California for Pesticide Reform
- **Engage a diverse group** of stakeholders! Reproductive health advocates, dog walkers, students, professors, that one guy who really loves sitting on the quad... literally anyone who utilizes green spaces on campus. This is pretty simple, and a great way to meet and create a community on campus.
- **Take advantage** of the current court cases and news stories surrounding glyphosate and Monsanto. Even if schools are not motivated to change for health reasons, they could very well be motivated to make the switch for liability reasons
- **Show up** at events and network, reach out to groups that already exist and utilize their network to build your own. You do not have to start from scratch; many groups already exist that may want to partake in this effort. So, rather than starting from the ground up, build on this existing network.

“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”

– Margaret Mead



VOCABULARY

Active Ingredient

Usually the only component of the formulation listed on the pesticide label because of proprietary reasons, meaning the maker of the pesticide does not need to disclose the entire chemical formulation. By definition these chemicals kill living things, and active ingredients are by nature, both biologically and chemically active against a target pest, be it an insect, weed, or fungus.

Inert Ingredients

Usually make up 95% of retail pesticide products. By law, the manufacturer is only required to list the active ingredients, although the other ingredients (inert ingredients, contaminants and impurities, metabolites) can be just as or more toxic.

Integrated Pest Management (IPM)

Although typically reliant upon synthetic pesticides, this pest management system also relies upon biological control methods, cultural practices, weather conditions, and sundry ecological methods to manage pests in farms, landscapes, or structures. The goal of a true IPM system should be to dramatically reduce or eliminate the use of pesticides. In theory, least-toxic pesticides should be used only after employing all other available methods of pest prevention and control. It is important to note that IPM techniques are sometimes touted in an effort to justify synthetic pesticide use.

Material Safety Data Sheet (MSDS)

A technical document that is required to accompany a controlled (pesticide) product label that includes information on the symptoms and health effects due to exposure, hazard evaluation from handling and use, and measures to protect workers at risk of exposure from said pesticide. It also includes emergency procedures, toxicological, ecological, and regulatory information, as well as proper disposal instructions.

Neonicotinoid

A type of insecticide that is particularly harmful to pollinators that are integral to our food system and the environment. These pesticides include: acetamiprid, clothianidin, imidacloprid, nitenpyram, nithiazine, thiacloprid and thiamethoxam.

Organic Land Care

Organic land care is a holistic approach to land management that integrates cultural, biological, and mechanical practices by fostering cycling of resources, promoting ecological balance, and conserving biodiversity. Organic land care is not simply about substituting organic-approved products for synthetic materials.

VOCABULARY

Pesticide Drift

The movement of pesticides away from the target site, either aerially or through runoff from products applied to the soil. Pesticide drift can result in unintended consequences such as damage to agricultural crops, harm to human and animal health, and environmental pollution.

Pesticide Usage Report

A document that details the chemicals used, the quantities used, and the dilution of the substance that can be helpful when trying to find out how much of what chemical is used by your school/target group.

Precautionary Principle

A guiding principle for many municipalities, nations, and even the United Nations, the precautionary principle places the burden of proof for a product's safety on the manufacturer instead of requiring citizens to assume the risk until a risk analysis proves the product to be unsafe for humans and/or the environment.

Surfactant

A substance which tends to reduce the surface tension of a liquid in which it is dissolved.



10. ADDITIONAL RESOURCES

HEALTH EFFECTS

- Health Effects of 30 Commonly Used Pesticides
- PAN Pesticide Database
- Non Toxic Communities Pesticide Research
- Pesticide-Induced Diseases Database
- Beyond Pesticides' Pesticide Gateway

ORGANIZATIONS

- Herbicide Free Campus
- Non Toxic Communities
- Beyond Pesticides
- Organic Land Care Project
- Yard Smart Marin

FLYERS

From Moms Across America

- Healthy Schools Initiative
- Pesticide Flyer
- Pesticide flyer -- Spanish



One last note...

No matter your field of study or expertise or experience organizing weeding work days or advocacy events, it is imperative to not substitute your learned knowledge in school for the lived experiences of the frontline communities most affected by pesticides. **It is not enough to carry these stories with us in our work. We must leverage our privilege to make space for each others' struggles and uplift the stories, vision, and leadership of the frontline communities.**

Thank you for your concerns for people, the planet, and the health of future generations. We can't wait to hear your success story and to add your city, school or local park to the list of places that are safe for our communities and ecosystems!

Onwards,
Herbicide-Free Campus and Beyond Pesticides