#Green the greens

students for safe and healthy campus grounds

a toolkit developed by Friends of the Earth and Teens Turning Green

Table of Contents

"The Earth is what we all have in common."

~ *Wendell Berry*
American Author and Environmental Activist

A campaign to inspire students, groundskeepers, landscapers and servicers to transition to chemical, toxic and pesticide-free lawn and garden management on college campuses.

About

Who

#Greenthegreens: students for safe and healthy campus grounds

What

A campaign to inspire students, groundskeepers, landscapers and servicers to transition to chemical, toxic and pesticide-free lawn and garden management on college campuses.

When

Starting in October 2014

Where

Campuses in the United States and around the world

Why

Because chemicals commonly used on lawns and gardens are often toxic and hazardous and pose long-term implications for the health of people and the planet. If you're a college student, you're most likely exposed to pesticides everyday through your campus green spaces: lawn, garden and playing fields and involuntarily through drift and runoff. Many of these chemicals not only impact our health and are linked to reproductive and developmental harm, kidney damage or cancer, but are also harmful to wildlife, plants, pollinators and natural ecosystems. We must demand our right to not be involuntarily exposed to pesticides in the air, water and soil and exchange toxic lawn and landscape pesticides with safer alternatives.

How

Join ***Teens Turning Green*** and ***Friends of the Earth*** to green your campus greens. We'll walk you through the steps of how to inform and mobilize students and members of your campus community to achieve toxic, chemical and pesticide-free campus gardens and grounds. Your work will ensure your campus is healthy and safe for all species and the planet.

"I really wonder
what gives us
the right
to wreck
this poor planet
of ours"

~ Kurt Vonnegut
American Author

The primary purpose of pesticides is to kill pests and unwanted insects. Once they are in our environment, they not only kill unwanted pests, but continue to harm people, pets, and wildlife— even threatened and endangered species.

FAQ's

Why should we transform the way our campus grounds are managed?

Millions of pounds of pesticides are applied on lawns and landscapes every year and use is steadily increasing. These chemicals are toxic for people, animals and the environment. The best way we can reduce pests and balance our ecosystem is to green the land management systems on our campuses and transition to sustainable integrated pest management or organic management practices.

What is Integrated Pest Management?

Integrated Pest Management also known as IPM uses strategies to manage pests that protects our health and the environment. This method utilizes non-chemical, natural-organic methods and mechanical and biological methods of pest control, act against pests only when necessary, and use least-toxic methods as a last resort. IPM relies on inspection and monitoring to detect and correct conditions that could lead to pest problems.

Why is organic or Integrated Pest Management (IPM) better?

Organic or IPM management of your campus gardens and grounds is the best way to manage, minimize or eliminate exposure to pesticides. These management techniques are safer for humans and wildlife like bees, butterflies, birds, worms and soil microbes. Through these techniques we're able to improve the quality of soil, making it better equipped to retain nutrients and water, reduce erosion and absorb air pollution like dust and soot. With these management techniques, grass is even better at converting carbon dioxide to oxygen, which creates clean air for the planet. The use of chemical fertilizers toxic pesticides on landscapes may initially make them look healthy and green, but the reality is that this chemical-intensive path requires more and more and more toxic chemicals over time. But organic or IPM management techniques reduce chemicals and damage to animals, humans and the environment.

How is wildlife impacted?

The primary purpose of pesticides is to kill pests and unwanted insects. Once they are in our environment, they not only kill unwanted pests, but continue to harm pets, and wildlife—even threatened and endangered species. For example, neonicotinoids (neonics for short), one of the world's most widely used pesticides—which are used on 140 crops-- are implicated as a key factor in recent bee die-offs. Neonics can be kill bees outright and sub-lethal exposure increases pollinator vulnerability and decreases natural resilience to external stressors such as pests and pathogens. These pesticides are often used to pre-treat "bee-friendly" plants and can probably be found on your campus. Bees pollinate one out of every three bites of food we eat, from almonds to berries to watermelons and without them we'd be in big trouble.

"The **average** lawn is an interesting **beast**: **people** plant it, then **douse it** with **artificial** fertilizers and dangerous **pesticides** to make it grow and to **keep it** uniform — all so that they can **hack** and **mow** what they encouraged to **grow.** And **woe** to the small **yellow flower** that rears its head!"

~ Michael Braungart
"Cradle to Cradle: Remaking the Way We Make Things"

As a university student, you're exposed to pesticides everyday via your campus lawns, gardens, sports fields and parks. Studies show that pesticides used on campus gardens and grounds are moving into our drinking water and polluting our streams from toxic runoff and drift.

FAQ's

What about water?

Studies show that pesticides used on campus gardens and grounds are moving into our drinking water and polluting our streams from toxic runoff and drift. There are 30 lawn pesticides that are commonly used, and of these 30, 17 are detected in groundwater, 23 have the ability to leach into drinking water sources, 24 are toxic to fish and other aquatic organisms vital to our ecosystem, 11 are toxic to bees, and 16 are toxic to birds.

What are the health risks?

A growing body of science demonstrates that these chemicals are linked to adverse health effects and when certain pesticides are combined, their toxicity can increase by as much as 1,000 times. Because nearly 1,000 active pesticide ingredients are registered for use, testing for these synergistic effects is nearly impossible. However, the National Academy of Sciences shows that one out of seven people are negatively impacted by lawn pesticide exposure because it is linked to asthma, allergies, cancer, kidney damage, birth defects and other long-term diseases. Children are especially at risk and considered a "frontline community" to exposure because their brains and bodies are developing and vulnerable to exposure and effects.

How are you exposed on campus?

As a university student, you're exposed to pesticides everyday via your campus lawns, gardens, sports fields and parks. Pesticides can drift and settle on desks, books, counters, and walls. Pesticides persist in dust and air, and when they are in the campus environment, everyone is susceptible to breathing contaminated air and touching contaminated surfaces.

Pesticides can concentrate indoors to levels ten times higher than pre-application levels! Of the 30 commonly used lawn pesticides, 19 are linked with cancer, 13 are linked with birth defects, 21 with reproductive effects, 26 with liver or kidney damage, 15 with neurotoxicity, and 11 with disruption of the endocrine (hormonal) system. The most popular and widely used chemical, 2,4-D, kills weeds, but is also linked to human health impacts like reproductive harm, thyroid problems and non-Hodgkin's lymphoma. If your campus is in a rural area, pesticides are probably drifting into your campus from agricultural fields. If your campus has any turf, you're also being exposed to pesticides there. Synthetic grass fields are made of materials including nylon and polyethylene, which can lead to exposure of many toxins.

"neonicotinoids are 5000 times more toxic than DDT, a pesticide banned decades ago in the UK."

"The toxicity of neonicotinoids takes your breath away – just five maize seeds treated with neonicotinoids are enough to kill a grey partridge."

~ *Dave Goulson*
University of Sussex

A growing body of science demonstrates that these chemicals are linked to adverse health effects and when certain pesticides are combined, their toxicity can increase by as much as 1,000 times.

FAQ's

Will this cost the university more?

While synthetic pesticide and fertilizer products produce instant results, frequent reapplication is required to obtain the desired effects. Organic and IPM management techniques require less money over a longer period of time and provide a longer-term payoff as you're safeguarding the health of people and the planet. Nothing can outweigh this cost.

If pesticides are on the market, aren't they safe?

The vast majority of pesticide products registered for use by the Environmental Protection Agency and our state governments have not been fully tested for the full range of human health effects. While in other countries they utilize the precautionary principle, which does not allow chemicals on the market if there are any data gaps or inadequate scientific evidence to determine a chemical's safety, in the U.S. pesticides can be registered even if there is evidence that they cause health and environmental risks.

Do other places in the country use IPM or organic management practices?

There are many cities, states and universities in the U.S. that are using the precautionary principle to cut down on the use of toxic pesticides on the gardens, parks and grounds in their communities to make them healthy and safe. Currently, there are 17 state laws that recommend or require schools to adopt an IPM program. In addition, 315 school districts and five individual schools have voluntarily adopted an IPM policy where no law mandates one. Recently, Emory University became the first university in the country to adopt a pollinator protection commitment to ban bee-killing pesticides from its gardens and grounds to take steps to protect essential pollinators. Read about Emory's shift and view its policy in this toolkit.

Are there alternatives?

Absolutely. Cities, states, and universities that have adopted organic and IPM management practices demonstrate that it is possible and not necessary to care for gardens and grounds with large amounts of chemical fertilizers and pesticides because there are safe, healthy and viable alternatives, products and practices.

"That **land** is a **community** is the basic **concept** of ecology but that **land** is to be **loved** and **respected** is an extension of **ethics.**"

~ Aldo Leopold
American Author, Ecologist and Environmentalist

Emory University realized that by leveraging their institutional purchasing power, they could transform the university into a safe haven for bees and other pollinators by providing suitable habitat and avoiding the use of bee-harming pesticides and plants pre-treated with these pesticides.

Case Study: Emory University

Emory is first university in the country to adopt a landmark policy to help restore the global ecosystem, foster healthy living and reduce the university's impact on the local environment.

Concerned about the plight of bees and other pollinators, essential for two-thirds of the food crops we eat everyday, Emory University developed a comprehensive pollinator protection campaign including a ban on a class of pesticides called neonicotinoids on its campus grounds. Implicated as a key factor in global bee die-offs by a growing body of science, neonicotinoids are systemic, long-lived, highly toxic and widely used. These pesticides can kill bees outright or impact their ability to fight off diseases and perform their duties.

Emory University realized that by leveraging their institutional purchasing power, they could transform the university into a safe haven for bees and other pollinators by providing suitable habitat and avoiding the use of bee-harming pesticides and plants pre-treated with these pesticides. In August 2014, Emory University adopted a pollinator protection commitment to ensure neonicotinoids would not be used on university grounds and any plants pre-treated with these pesticides would not be planted. In addition, Emory committed to plant pollinator-friendly habitats on campus and conduct campus outreach and education. By adopting this commitment, Emory University became the first university in the country to adopt this type of landmark policy to help restore the global ecosystem, foster healthy living and reduce the university's impact on the local environment.

Emory University's steps to develop a pollinator protection commitment

1. Assessed current practices

The Office of Sustainability worked closely with the Grounds Department to conduct a review of pesticides used on campus grounds to reveal what neonicotinoid products were currently being used and found that no neonicotinoid pesticides were being widely dispersed, but two neonicotinoids were being used in limited applications.

2. Identified safe alternatives

The Office of Sustainability and Grounds identified safe alternatives to ensure the university didn't use more harmful or regrettable substitutions in place of neonicotinoids. Emory used the Pesticide Research Institute online pesticide product assessment tool, PestSmartTM to assist the process.

3. Developed campus landscaping standards

To ensure that all landscaping does not include plants pre-treated with neonicotinoids, the Office of Sustainability worked with Grounds and Planning, Design, and Construction to ensure that only plants that have not been pre-treated with neonicotinoids will be purchased for use on

Emory's campus, to the extent feasible. Campus Services contacted Emory's plant nursery supplier to ensure that they would not pre-treat plants with neonicotinoid pesticides. The Office of Sustainability worked with the Office of Procurement to add requirementsabout the pollinator protection commitment in all grounds-related contracts.

4. Wrote commitment

The Office of Sustainability wrote a pollinator protection commitment based on feedback from Grounds, Procurement, and Planning, Design, and Construction.

5. Got approval

The Office of Sustainability presented a proposal to senior administration on the steps Emory could take to be a safe haven for bees and other pollinators. The University approved the commitment!

6. Communicated the efforts

The student newspaper and campus news center ran a story about the move to inform the university community about the steps Emory took to protect pollinators. The Office of Sustainability helped to spread the word via social media and an Emory professor wrote an op-ed in the Atlanta Journal Constitution newspaper about Emory's commitment

7. Conducted education and outreach

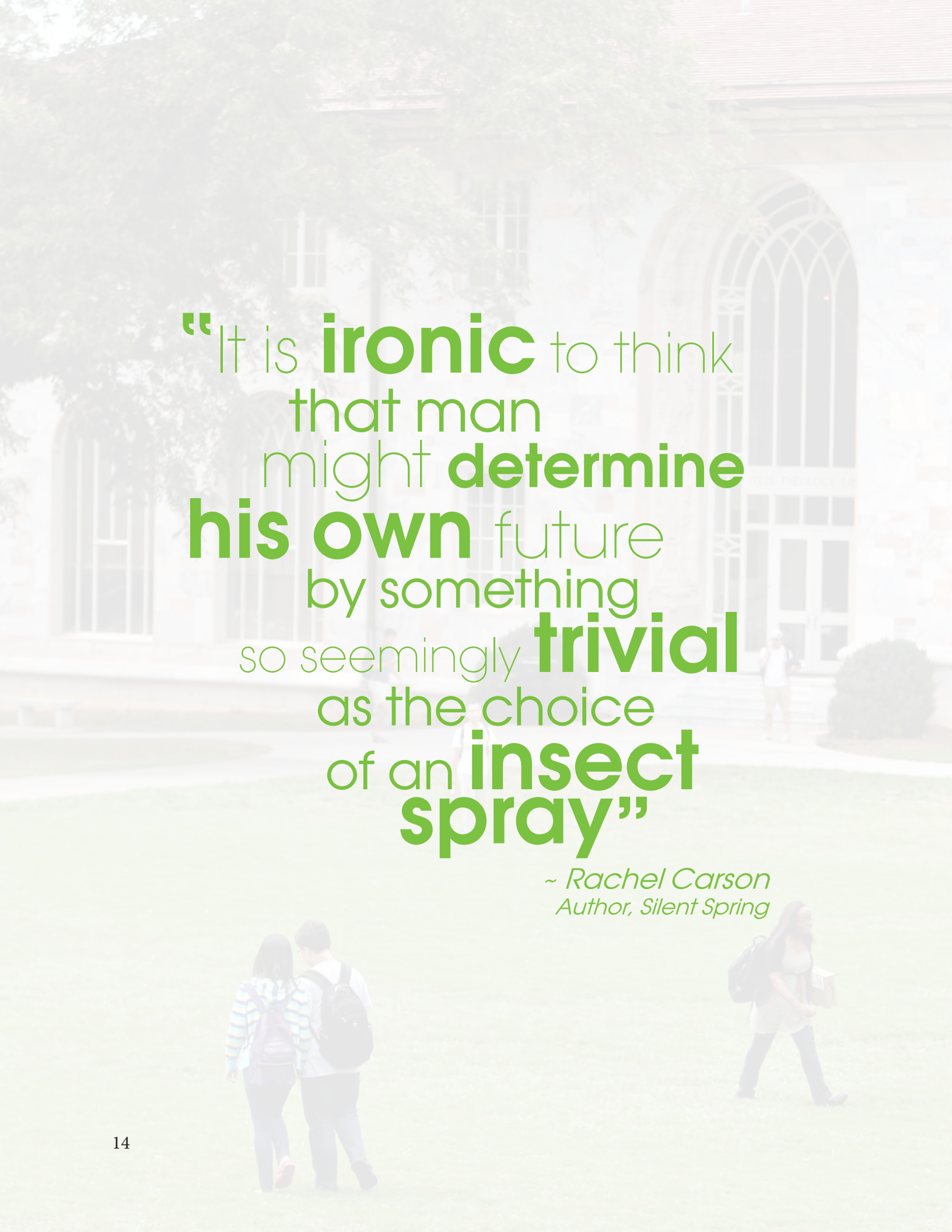
The Office of Sustainability Initiatives holds educational events on campus so the Emory community can learn about the importance of pollinators and why the university pollinator protection commitment is important for the health of our food supply and environment.

Emory's Commitment

- Eliminate neonicotinoid use on campus grounds
- Purchase plants for campus landscaping that have not been pre-treated with neonicotinoids, to the extent feasible
- Specify in contracts with vendors and campus construction standards not to use neonicotinoid insecticides or plants pre-treated with neonicotinoids.
- Ensure substitutes for neonicotinoid pesticides are safe for pollinators
- Plant pollinator-friendly habitats on campus
- Conduct campus outreach and education

Contract language

Contractor understands and agrees that it is not permitted to utilize neonicotinoid pesticides for outdoor use when fulfilling the delivery requirements of any numbered PO or when performing services for Emory University. Contractor further understands and agrees that all plants pre-treated with neonicotinoid pesticides are prohibited and are not to be delivered under this PO or Agreement. Any Products containing or treated with neonicotinoid pesticides for outdoor use delivered beyond the date shown on this PO or Agreement will, upon receipt of written notice from the buyer, be removed by Contractor (at its expense) and a refund or credit issued (at the option of the buyer) for the amount of any neonicotinoid product purchased, delivered, and subsequently removed.



"It is **ironic** to think that man might **determine his own** future by something so seemingly **trivial** as the choice of an **insect spray**"

~ Rachel Carson
Author, Silent Spring

How to get your university to adopt an IPM or organic management policy

You have the power to take action and build momentum for a safe and healthy campus environment. Here are steps you can take to green the green on your campus and transition your campus from and the use of toxic chemicals to safe and healthy alternatives.

Step One: Educate yourself

The first and most important thing you'll need to do is get educated on the issue.

- Find out if your university has a current IPM or grounds management policy and who administers it -- a certain department, a contractor or another entity.
- Find out if the school has its own grounds management department or has service contracts with other landscaping and grounds management services.
- Find out what products your landscaping and service providers buy and use on your campus. Who make the purchasing decisions? Does the provider have a history of giving a preference to certain products? Who is involved with the decisions?
- Request copies of current contracts for all relevant products.
- Learn as much as you can about your school and its grounds management practices.

Step Two: Evaluate the program

- Learn about the hazards of pesticide exposure and benefits of integrated pest management and organic management practices for pest control. Check out the resources guide in this toolkit to get started.

Using this information as a foundation, identify what the best option is for your school and steps your university should take for an effective policy and program. You may want to start with getting rid of certain high risk pesticides like 2,4-D or neonicotinoids as a first milestone toward going completely IPM or organic on campus.

Step Three: Organize your campus

Unfortunately, having the idea to green your campus won't be enough to win, but having student power will! It's important that you start building a large and broad coalition of student groups and members of your community to push your campus to adopt a sustainable and environmentally sound garden and grounds management policy.

Here's how to start

- Contact other student groups who care or are affected by your university's pesticide use and begin forming a coalition of these allied groups. Contact appropriate school official(s) and ask for an endorsement.
- Write a letter to your school decision maker requesting the school adopt a pollinator protection commitment, IPM or organic management policy and request a meeting to discuss the issue further. Provide examples of other universities and explain why it makes sense for the health of the campus community and environment. Ask all of your allies and endorsers to sign the letter.
- Organize a letter delivery with all of the signers of the letter to the decision maker at your university. Try to have a brief conversation with the decision maker and try to set-up a meeting with the decision maker and all of your allies.

Step Four: Make your case

- If your university administrator agrees to meet with you, bring at least two to four people from the university and your allied organizations, department heads, professors or others who have influence on the decision maker. Present a draft of your pollinator protection commitment, IPM or organic management policy and talk about how you would like to see it implemented. Listen to any questions or concerns and work to develop a mutually acceptable policy. The more community support you have, the easier it will be to reach your goals.

Step Five: Continue to organize and mobilize

If after the first meeting your university has agreed to adopt a policy, then you are on the road to winning! Chances are you may need to gather some more support and need to start spreading the word as much as you can. Here are some ways to continue organizing on your campus. Begin with the first bullet and slowly work your way down the list until you get your desired outcome.

- Organize a petition drive and get signatures from many of the students on your campus
- Write letters to the editor of your school paper and try to speak on your school radio shows about why it is important the school adopt the policy.
- Hold a press conference.

Organize a film screening, concert or other educational events.

- Offer presentations or workshops to classes, organizations or other groups in your campus community.
- Hold a hearing to present testimony and pack the room so the university sees there is broad support for this policy.
- Hold a rally or demonstration in front of the decision maker's office.

Step Six: Celebrate and implement

Once you win your campaign, be sure to celebrate your victory. Make sure everyone that was involved along the way feels appreciated and is recognized.

- Although your university is responsible for implementing the new policy, you will need to stay engaged and make sure the policy is being implemented properly.
- Monitor contracts, research any possible violations and make sure your university is holding contractors accountable to the policy.
- Consider creating a committee to oversee the policy. The committee could be made up of students, student groups, faculty members, school administrators, facility and landscape staff and any company contracted by the school. The committee could help with the implementation and development of the policy to ensure everything is running smoothly.

Resources

Beyond Pesticides
beyondpesticides.org

Center for Health and Environmental Justice
childproofing.org

Environment and Human Health, Inc.
ehhi.org

Friends of the Earth
foe.org
beeaction.org

Greenscapes
greenscapes.org

Grassroots Environmental Education
grassrootsinfo.org

Healthy Schools Network
healthyschools.org

Improving Kids Environment
ikecoalition.org

IPM Institute of North America
ipminstitute.org

Pesticide Action Network North America
panna.org

Pesticide Research Institute
PRI.org

PestSmart ™ Web
pesticideresearch.com/site/pestsmart/

Rodale Institute
rodaleinstitute.org

SafeLawns
Safelawns.org

Safer Chemicals Healthy Families:
saferchemicals.org

School Pesticide Reform Coalition
beyondpesticides.org/toxicfreeschools

Teens Turning Green
teensturninggreen.org

Pinterest Resource Board

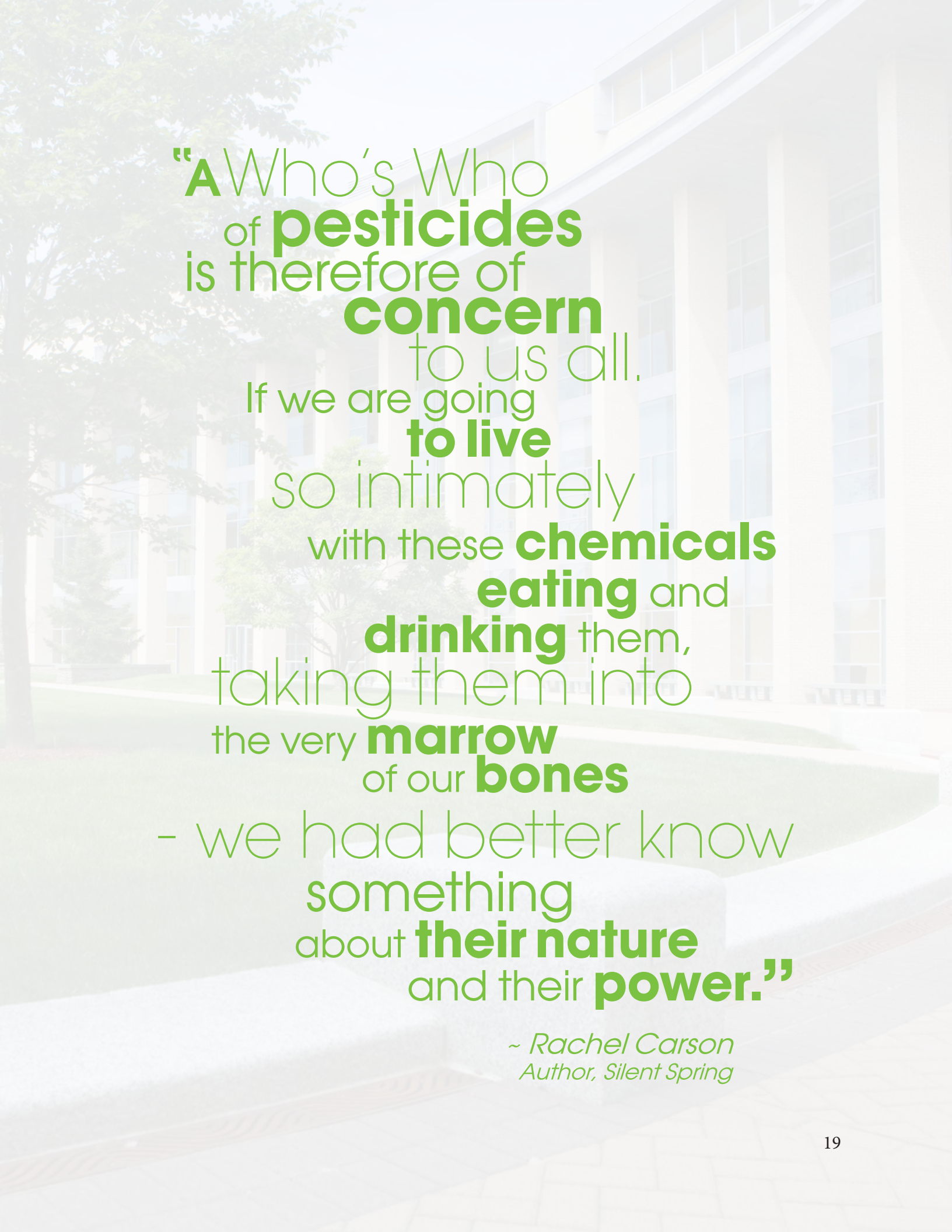
Contact

For more information or to start a Green the Greens Campaign on your campus

Emory University
Office of Sustainability Initiatives
emorysustainability@emory.edu.

Friends of the Earth
Tiffany Finck-Haynes, Food Futures Campaigner
beeaction@foe.org.

Teens Turning Green
Judi Shils, Executive Director
judishils@earthlink.net


"A Who's Who
of pesticides
is therefore of
concern
to us all.
If we are going
to live
so intimately
with these chemicals
eating and
drinking them,
taking them into
the very marrow
of our bones
- we had better know
something
about their nature
and their power."
~ Rachel Carson
Author, Silent Spring