



LEAD for Pollinators, Inc.

1624 Idlewood Ave.

Akron, OH 44313

www.leadforpollinators.org

June 12, 2021

We the undersigned represent plant nurseries, garden centers, Master Gardeners as trained by The Ohio State University Extension, urban farmers, beekeepers, homeowners, and local, regional, and national advocates for pollinators, healthy soils, clean water, and supporters of pollinators and ecosystem biodiversity. We join with LEAD for Pollinators, Inc. in supporting changes to two City of Akron Ordinances pertaining to “species and height of plants” as the Ordinances are outdated, unscientific, and not representative of Akron community planting for nearly thirty years.

Proposed Action: Change two City of Akron, Ohio Ordinances

We are writing to show our support for the removal from the City of Akron **Noxious Weed Ordinance #94.29** list of “noxious weeds” native plants which are supportive of pollinators, along with the removal of the four inch maximum height restriction for plants in the devilstrip/treelawn/utility right-of-way, **Ordinance #98.01**.

City of Akron Ordinances

https://library.municode.com/oh/akron/codes/code_of_ordinances?nodeId=TIT9GEPR_CH101TRSH_101.11RE

94.29 - Noxious weeds. (current)

A. No person who is the owner or in charge of land within the City shall permit to grow thereon any **ragweed, field daisies, goldenrod, burdock, yellowdock, dandelions, thistles, jimson weeds, milkweeds, polygonum, mullein, poison ivy, poison oak, or other weeds or grasses of rank growth**, exceeding eight inches in height. Inspection shall occur during the growing season, beginning not later than April 1st of each year, and concluding no earlier than the first killing frost as recorded by the Department of Commerce, National Weather Service Office of local jurisdiction.

98.01 - Maintenance and repair. (current)

A. Sidewalks, Curbs, Gutters.

5. No person shall obstruct any sidewalk or land between the property line and curbing or edge of the pavement, dedicated utility right-of-way or roadway **by placing or allowing to remain any anchored articles or substances greater than four inches in height, including, but not limited to, scrub growth, bushes, signs and rocks on the sidewalk or property between the sidewalk or and between the property line and curbing or edge of the pavement, dedicated utility right-of-way or roadway.**

Value, diversity, and pest control of and by pollinators

The nearly 4,000 native pollinators in North America need flowering plants, trees, and shrubs for food and habitat. Pollination services provided by bees, butterflies, moths, hummingbirds, and beetles beautify our community, and support native plants (which are drought tolerant with deeper roots preventing soil erosion).

A variety of pollinators (such as dragonflies, damselflies) and other beneficial insects, amphibians, and birds which also benefit from pollinator habitat (for seeds, shelter) also help control mosquitos.

According to *Terminex*, birds, frogs, tadpoles, fish, toads, salamanders, spiders, red-eared slider turtles and many types of insects all play vital roles in keeping the mosquito population at bay. Some creatures, like the small brown bat, can catch up to 600 mosquitoes in just one hour. Dragonflies, especially during the immature states of the dragonfly life cycle, also feed on mosquito larvae. Bird species which eat the most mosquitoes are purple martins, red-eyed vireos, chirping sparrows, downy woodpeckers, yellow warblers, Eastern bluebirds, Eastern phoebes, Baltimore orioles, geese, terns, ducks and common wrens and nighthawks. These birds feed on the aquatic and adult life stages of mosquitoes. The three species of frogs that commonly feed on mosquito larvae during their tadpole stage are the giant tree frog, the green tree frog and the spadefoot toad.

Pollinator habitat on vacant city lots absorbs standing water, preventing mosquito breeding sites. Even invasive plants such as Japanese Knotweed absorb standing water on vacant lots and provide fall pollen and nectar for pollinators.

Honey bees alone pollinate 80 percent of all flowering plants, including more than 130 types of fruits and vegetables.

The United States Department of Agriculture states, "One out of every three bites of our food, including fruits, vegetables, chocolate, coffee, nuts, and spices, is created with the help of pollinators."

"Pollinators are also a key part of the food web. Insects, like moths, feed more than 80 percent of birds in the U.S., as well as reptiles, amphibians, and mammals. Plus, pollinators contribute to healthy soils and clean water by fostering robust plant communities."

Value of Pollinator Habitat to Farms for Food Security

Reported by OSU Extension in "Urban Agriculture in Ohio," "nearly 1 in 7 [Ohio] households experiences food insecurity, meaning the household cannot afford balanced meals on a regular basis. That rate is higher than the national average, according to the U.S. Department of Agriculture."

"Urban agriculture and local food production are a growing phenomenon for several reasons, including to address food insecurity, as a means for an economic enterprise, for community building, and as job training for young people and others," said Mike Hogan, an OSU Extension agriculture and natural resources educator.

City of Akron urban farms rely upon pollinators to pollinate their fruits, vegetables, and nuts. Some pollinators are also effective predators of pests helping to protect crops.

"All told, pollinators' ecological service is valued at \$200 billion each year. This includes their important role in generating more profitable yields on America's working agricultural lands." (<https://www.farmers.gov/connect/blog/conservation/value-birds-and-bees>)

National Science Foundation research published Feb. 3, 2021 found "Pollinators like bees play an extremely important role in agriculture," explained senior author Vikas Khanna, Wellington C. Carl Faculty Fellow and associate professor of civil and environmental engineering at Pitt's Swanson School of Engineering. "The insects that pollinate farmers' crops underpin our ecosystem biodiversity and function, human nutrition, and even economic welfare." . . . "The value of insects as part of our economy is apparent when you look at the well-established connection between farming and beekeeping. Farmers sometimes will buy or rent bee colonies to help pollinate their crops when there aren't enough wild bees in the area," said Khanna. "We've found that some of the areas that are economically most reliant on insect pollinators are the same areas where pollinator habitat and forage quality are poor." . . . "The researchers found that 20 percent of U.S. counties produce 80 percent of total economic value that can be attributed to wild and managed pollinators. Their findings will inform conservation efforts and ensure sustainable production of key crops."

Need for Pollinator Habitat

National Resources Conservation Service of USDA Working Lands for Wildlife states, “Monarch populations have plummeted from one billion to only 34 million in the past 25 years.”

Allowing pollinator supportive plants, like Milkweed, for the Monarch butterfly along their migratory route provides refuge and food at the beginning and end of their annual migration from Mexico to Canada and supports the conservation of wild monarch populations in North America. The decline of Monarch butterflies is primarily due to loss of their habitat – both the forested groves in which they overwinter and the milkweed and wildflowers that they need from spring to fall – as well as damage from pesticides and climate change.

University of Georgia Extension reminds us “Pollinators need more than pollen and nectar to survive and help produce food for people.” “To survive, pollinators need more than just flowers as sources of pollen and nectar. They also need water, bare ground for nesting, shelter and nesting materials. In natural areas, these items are readily available. But in urban and residential areas, these resources are often limited. Landscapes with manicured turfgrass and ornamental shrubs, while very attractive, are often not welcoming habitats for pollinators.”

“When we think of pollinators, we often picture commercial beehives, but many bee species nest underground and are solitary, meaning only one bee per nest. Bumblebees, sweat bees, miner bees and cellophane bees are all native bees that nest underground. Ground-nesting bees prefer soil that is sandy and dry. Leaving drier patches of your landscape bare of plants will provide important nesting habitats for bees that nest underground. Wood-nesting bees, such as mason bees, carpenter bees, orchard bees and leafcutter bees, ideally use dead tree trunks or “snags” for nesting sites.”

“Another way to create a pollinator-friendly landscape is to plant a variety of flowers that bloom at different times of the year. Pollinators need pollen and nectar from flowers, but not every flower will be used by pollinators. Lantana, zinnias, cosmos, bee balm, coneflowers, catmint, salvias, black-eyed Susans and milkweeds are some of the herbaceous plants that will attract pollinators. Larger plants, such as flowering trees and shrubs, are also beneficial for pollinators. Shrubs that provide pollen and nectar include American beautyberry, glossy abelia, lacecap hydrangea, sweet spire and fragrant tea olive. Pollinator-friendly trees, such as black locust, chaste tree, sumac, cherry, crabapple, crape myrtle, catalpa, tulip poplar, eastern redbud and red maple can also be incorporated into landscapes. Adding food, water, shelter and nesting habitats to developed residential areas will help promote pollinator health.” In short, pollinators need flowering plants, trees, and shrubs that bloom across the growing season for food and shelter.

Value of Urban Gardens and Forests

Green infrastructure in urban areas is important for the health and safety of residents, and helps build community. According to research by Friends of the Urban Forest:

- Street trees and sidewalk gardens provide a natural habitat for birds and insects.
- Desk workers with views that included green elements were more satisfied and displayed an increased enthusiasm for work, improved patience and lower frustration, and fewer health problems.
- In a neighborhood with more street trees and other plants, people judge walking distances to be less, and are therefore more likely to travel on foot, which has health benefits.
- Street trees and sidewalk gardens create a physical and mental barrier between the street and the sidewalk, keeping pedestrians, children, and pets out of harm's ways.
- Apartment buildings with high levels of greenery had 52% fewer crimes than those without any trees. "Green" spaces are used more frequently (by pedestrians and for recreation), which increase "eyes on the street" and defers would-be criminals.
- Street trees and sidewalk gardens build neighborhood and civic pride, and neighborhood planting events strengthen communities. That greater sense of community also alleviates mental fatigue, a precursor to violent behavior.
- Consumers have a 12% higher willingness to pay for goods and services in retail areas that have streetscape greening such as street trees and sidewalk gardens. They will also travel greater distance to visit a district having high quality trees, and spend more time there once they arrive.

City of Akron's list of noxious weeds contains plants beneficial to pollinators & other insects

Pollen and nectar are food sources for bees, wasps, ants, beetles, flies, butterflies, and moths

- **Ragweed**- a fall source of pollen (Native plant of Ohio)
- **Field daisies** – pollen source; 23K species; (Lake Side Daisy is Native to Ohio);
- **Goldenrod**- a fall source of pollen (Native plant of Ohio)
- **Burdock**- provides nectar and pollen (*non-native plant*)
- **Yellowdock** (member of the buckwheat family)-food source for insects and caterpillars (Native to Ohio) (Yellow dock is also known as curled dock, narrow dock and curly leaf dock.)
- **Dandelions**- a spring source of nectar (*non-native plant*)
- **Thistles**- nectar source for pollinators (some species are Native to Ohio)
- **Jimson weeds**- attractive to bees, butterflies, moths (but can be poisonous to mammals) (non-native plant)
- **Milkweeds**- attract a large suite of butterflies, flies, beetles, bees, and wasps. (13 varieties of Milkweed; Native Milkweeds in Ohio)

- **Polygonum** (knotweeds) –nectar for pollinators (16 species are Native to Ohio)
- **Mullein**-mid-summer pollen and nectar source (4 species are Native to Ohio)

Shasta daisies are a pollen source for bees --<https://www.onegreenplanet.org/lifestyle/why-bees-need-you-to-plant-these-flowers-now/> The daisy belongs to the Asteraceae family. With over 1,500 genera and **23,000 species**, it is the largest family of flowering plants.

The foliage, roots, seeds, and other parts of Curly Dock (*Rumex crispus*) and other dock species (*Rumex* spp.) are eaten by various insects. This includes *Gastrophysa cyanea* (Green Dock Beetle), larvae of *Lixus concavus* (Rhubarb Weevil), *Pegomya bicolor* (Curled Dock Leaf-miner), *Aphis rumicis* (Dock Aphid), larvae of *Ametastegia glabrata* (Dock Sawfly), larvae of *Dypterygia rozmani* (American Bird's Wing Moth), and larvae of *Lycaena phlaeas americana* (American Copper). **Curly Dock and Sheep Sorrel (*Rumex acetosella*) are the two known host plants of the butterfly, American Copper.**

[https://www.illinoiswildflowers.info/weeds/plants/curly_dock.htm#:~:text=Each%20plant%20has%20perfect%20\(bisexual,flowers%20also%20have%206%20stamens.](https://www.illinoiswildflowers.info/weeds/plants/curly_dock.htm#:~:text=Each%20plant%20has%20perfect%20(bisexual,flowers%20also%20have%206%20stamens.)

Goldenrod is a key autumn food source for pollinators before they hibernate for the winter. This last plant of the season provides a golden, spicy honey harvested by beekeepers, but affords the honey bees, and other pollinators with a final round of pollen and nectar collection to provide them with enough food to survive the winter.

The Ohio Native Plant Month celebrates and encourages the planting of some of the “noxious weeds” listed in the City of Akron Ordinance. The native wildflower list below features Milkweed and Goldenrod as native plants. Many native plants are host plants for specific insects like Milkweed for Monarchs, and Curly Dock (yellowdock) for the American Copper butterfly.

Wildflowers:

- Chamaecrista fasciculata - Partridge Pea
- Heliopsis helianthoides - Ox Eye Sunflower
- Gaillardia pulchella - Indian Blanket
- Echinacea purpurea - Purple Coneflower
- Monarda citriodora - Lemon Mint
- Coreopsis lanceolata - Lanceleaf Coreopsis
- Senna hebecarpa - Wild Senna
- Rudbeckia hirta - Black-eyed Susan
- Ratibida pinnata - Yellow/Grey-headed Coneflower
- Liatris spicata - Dense Blazingstar
- Asclepias syriaca - Common Milkweed**
- Asclepias tuberosa - Butterfly Milkweed**
- Asclepias incarnata - Swamp Milkweed**
- Monarda fistulosa - Wild Bergamot

Baptisia australis - Blue False Indigo
Tradescantia ohiensis - Ohio Spiderwort
Zizia aurea - Golden Alexanders
Penstemon digitalis - Foxglove Beardtongue
Aster laevis - Smooth Aster
Aster azureus - Sky Blue Aster
Aster novae-angliae - New England Aster
Solidago rigida - Stiff Goldenrod
Pycnanthemum tenuifolium - Narrow Leaved Mountain Mint

Windborne pollen versus insect carried pollen and human allergies

The Asthma and Allergy Foundation of America clarifies the main culprits of seasonal allergies. “Most of the pollens that cause allergic reactions come from trees, weeds and grasses. These plants make small, light and dry pollen grains that travel by the wind. Grasses are the most common cause of allergy. Ragweed is a main cause of weed allergies. Other common sources of weed pollen include sagebrush, pigweed, lamb’s quarters and tumbleweed. Certain species of trees, including birch, cedar and oak, also produce highly allergenic pollen. **Plants fertilized by insects**, like roses and some flowering trees, like cherry and pear trees, **usually do not cause allergic rhinitis.**”

According to The Asthma and Allergy Foundation of America, “In the late summer, about 15% of Americans have symptoms from an allergy to ragweed pollen. In most areas in the U.S., it peaks in mid-September. When mid-August nights grow longer, ragweed flowers mature and release pollen. Warm weather, humidity and breezes after sunrise help release the pollen. The pollen then travels through the air to another plant to fertilize the seed so a new plant can grow next year. Ragweed pollen can travel far. It has been found in the air **400 miles out to sea and two miles up in the atmosphere.**”

According to HealthLine’s *Top Pollen Offender* list, ragweed is the only plant listed that corresponds to the City of Akron’s Noxious Weed list.

<https://www.healthline.com/health/allergies/pollen-library#Weed-Pollen-Allergies>

Four Inch Limit on Height of Plants in Devilstrip is Unrealistic and Unhealthy

Heather McCargo writes for the Ecological Landscape Alliance, “Let us reclaim this forgotten territory and create native habitat that will cool ground temperatures, absorb and filter rainwater, support pollinators, and bring a smile to the passersby! . . . we need to green this public space for our collective sanity and to share some space with our region’s native species. These planted medians will bring wildlife habitat to towns and cityscapes, bringing your street

one step closer to a less paved world. Furthermore, it is a terrific way that apartment dwellers and those without land can get involved in community planting. . . . Imagine our urban streets transformed to green corridors with extensive [devil]strips and pocket parks along every route! “

Lawns and Mowing

Ellen Paul, sustainability advocate writes in “Lawns are green—they’re also terrible for the environment” reminds us that “The Environmental Protection Agency estimates that about *a third* of all public water is used to water grass. In the US, lawns consume nearly 9 billion gallons of water a day, and our mowers consume 200 million gallons of gas.” Lawn “fertilizers wash off of lawns, into storm sewers, and eventually flow into streams, rivers, and lakes, where the excess nutrients cause algal blooms that choke out sunlight and kill the submerged aquatic grasses young fish and shellfish need for shelter from predators. Most fertilizers are petroleum-based bags of negative environmental impacts. The herbicides run off into our waterways, contaminating the water we drink and the fish we eat.”

Removing some or even most of a lawn has additional benefits:

- there’s less time spent on mowing and less money spent on lawn care
- less lawnmower noise in the neighborhood
- reduce our need for water and gasoline

The U.S. Environmental Protection Agency estimates that, hour-for-hour, gas-powered lawn mowers produce 11 times as much pollution as a new car.

Even if grass only is left to grow in the devilstrip cutting it less than 4 inches is unhealthy for the grass. Grass itself only has a 3-4 inch root system, when the grass is cut too short, the roots dry out, weeds have a better chance of growing, and water and lawn chemicals run-off into the street, storm sewers, and waterways of the City.

Dr. Philip Dwyer, a research principal for lawns at Scott’s Miracle Gro Research and Development recommends for grass in devilstrips cities “adjust their *upper limit up to 6”* as 4” is quite acceptable and in the spring a lawn mown to 4” would grow up to 6” between mowings.” Here’s a resource on the benefits of mowing on the higher side. (https://www.canr.msu.edu/news/mow_high_for_weed_and_grub_control)

Summary

We encourage the City of Akron to adjust **Ordinance 94.29 - Noxious weeds** by **removing the following from their list of noxious weeds** as these are native Ohio plants and beneficial to pollinators and do not add to human allergen concerns:

- Field daisies – pollen source; 23K species of daisies; (Lake Side Daisy is Native to Ohio);
- Goldenrod- a fall source of pollen (Native plant of Ohio)
- Yellowdock (member of the buckwheat family)-food source for insects and caterpillars (Native to Ohio) (Yellow dock is also known as curled dock, narrow dock and curly leaf dock.)
- Dandelions- a spring source of nectar (*non-native plant but in US for 400+ years*)
- Thistles- nectar source for pollinators (some species are Native to Ohio)
- Milkweeds- attract a large suite of butterflies, flies, beetles, bees, and wasps. (13 varieties of Milkweed; Native Milkweeds in Ohio)
- Polygonum (knotweeds) –nectar for pollinators (16 species are Native to Ohio)
- Mullein-mid-summer pollen and nectar source (4 species are Native to Ohio)

We encourage the City of Akron to adjust **Ordinance 98.01- Maintenance and repair by removing the words “scrub growth, bushes”** as part of the four inch height restriction.

For example the revised ordinance could read:

B.5. No person shall obstruct any sidewalk or land between the property line and curbing or edge of the pavement, dedicated utility right-of-way or roadway **by placing or allowing to remain any anchored articles or substances greater than four inches in height, including, but not limited to, signs and rocks on the sidewalk or** property between the sidewalk or and between the property line and curbing or edge of the pavement, dedicated utility right-of-way or roadway.

Sincerely,

Educational Resources

How to Maximize Benefits to Pollinators in Cities and Towns <https://www.xerces.org/earth-week-urban-hag>

Pollinators Need You. You Need Pollinators <https://www.pollinator.org/pollinators>

Pollinators need more than pollen and nectar to survive and help produce food for people <https://newswire.caes.uga.edu/story.html?storyid=6431&story=Pollinator-Habitats>

Become a Bee City or Bee Campus USA <https://beecityusa.org/>

Tree City USA- Trees for Bees <https://www.arboday.org/trees/health/pests/article-trees-for-bees.cfm>

Mosquitos and Pollinators- How to Protect Public Health and Pollinators
<https://leadforpollinators.org/mosquitoes-and-pollinators/>

Monarch Watch <https://www.monarchwatch.org/>

iNaturalist <https://www.inaturalist.org/>

Attracting Pollinators to the Garden- OSU Extension <https://ohioline.osu.edu/factsheet/ENT-47>

Summit Soil & Water Conservation District -Individual Acts of Conservation
<https://sswcd.summitoh.net/featured/individual-acts-conservation>

Summit Food Coalition Farmers Markets
<https://www.summitfoodcoalition.org/farmers-markets>

OPN Seed- Bee Friendly Seed Mixes
<https://www.opnseed.com/shop/bee-friendly-mixes-46625>
<https://www.opnseed.com/shop/ohio-native-plant-month-seed-packet-107877>

FTD.com-Types of Daisies [Types of Daisies: A Visual Compendium - FTD.com](#)

Trees.com-daisies <https://www.trees.com/flowers/daisies> 23 top daisies

The Value of Birds and Bees
<https://www.farmers.gov/connect/blog/conservation/value-birds-and-bees>

National Science Foundation research: “The Business of Bees: The economic value of insect pollination services is much higher than previously thought in the US,” Science News
<https://www.sciencedaily.com/releases/2021/02/210203144555.htm>

Ohio Birds and Biodiversity
[Ohio Birds and Biodiversity: The joys of ragweed \(jimccormac.blogspot.com\)](#)

Dr. Randall Mitchell Lab, The University of Akron, studying evolutionary ecology of plant pollinator interactions, focusing on how plant mating patterns and success are affected by pollinator behavior and abundance.
<https://blogs.uakron.edu/mitchell/>

Ohio Pollinator Habitat Initiative <http://www.ophi.info/>

Native Plants for Pollinators, OSU Bee Lab <https://u.osu.edu/beelab/native-plants-for-native-pollinators/>

Native Bees-OSU Bee Lab <https://u.osu.edu/beelab/native-bee-identification/>

Lakeside Daisy State Nature Preserve
<https://trekohio.com/2013/05/12/lakeside-daisy-state-nature-preserve/>

List of Native Plants — Ohio Native Plant Month <https://www.ohionativeplantmonth.org/native-plant-list>

Buy A Yard Sign for Your Native Plant Habitat! — Ohio Native Plant Month
<https://www.ohionativeplantmonth.org/buy-a-native-plant-yard-sign>

Ohio Invasive Plants Council - HOME - OHIO INVASIVE PLANT COUNCIL (oipc.info) <https://www.oipc.info/>

Native Thistles: A Conservation Practitioner's Guide | Xerces Society
<https://xerces.org/publications/guidelines/native-thistles-conservation-practitioners-guide>

Choosing a milkweed species for your garden | Butler (osu.edu)
<https://butler.osu.edu/search/site/news%20choosing%20milkweed%20species%20your%20garden%20text%20There%20are%2013%20varieties%20of%20milkweed%20native%20to%20will%20fit%20best%20into%20your%20home%20garden%20beds>

Ohio Native Milkweed - GROW MILKWEED PLANTS <https://www.growmilkweedplants.com/ohio.html>

Occurrence and Distribution of Polygonum Species in Ohio (osu.edu)
https://kb.osu.edu/bitstream/handle/1811/23517/V092N4_088.pdf;sequence=1

ALTERNATIVES TO OHIO'S INVASIVE PLANT SPECIES
https://www.oipc.info/uploads/5/8/6/5/58652481/alternatives_to_ohio_invasive_plant_species.pdf

Mulleins of Ohio · Naturalista.co (inaturalist.org)
<https://colombia.inaturalist.org/projects/wildflowers-of-cuyahoga-valley-national-park/journal/43086-mulleins-of-ohio>

Plant and Create Pollinator Habitat Gardens
<https://www.nwf.org/garden-for-wildlife/about/national-initiatives/plant-for-pollinators>

Urban Agriculture in Ohio- OSU Extension <https://cfaes.osu.edu/stories/urban-agriculture-in-ohio>

Unpaving Paradise: “Residual Spaces” and “Hellstrips”
<https://www.deeproot.com/blog/blog-entries/unpaving-paradise-residual-spaces-and-hellstrips>

Sidewalk gardening-Friends of the Urban Forest
<https://www.fuf.net/programs-services/greening/sidewalk-gardens/>

Benefits of Urban Greening-Friends of the Urban Forest <https://www.fuf.net/benefits-of-urban-greening/>

Add Curb Appeal with a Hellstrip Garden-Ecological Landscape Alliance-This Old House
<https://www.thisoldhouse.com/gardening/21015037/add-curb-appeal-with-a-hellstrip-garden>

Hellstrip Plantings: Creating Habitat in the Space Between the Sidewalk and the Curb
<https://www.ecolandscaping.org/05/designing-ecological-landscapes/native-plants/hellstrip-plantings-creating-habitat-in-the-space-between-the-sidewalk-and-the-curb/>

Urban Farming 101 www.freightfarms.com

Soil Solarization for Gardens and Landscapes

http://soilhealth.ucdavis.edu/application/files/4115/4207/8884/Soil_Solarization.pdf

Allergy reactions--List of Top Pollen Offenders

<https://www.healthline.com/health/allergies/pollen-library#Weed-Pollen-Allergies>

Pollen Allergies | AAFA.org <https://www.aafa.org/pollen-allergy/>

Ragweed Pollen Allergy | AAFA.org <https://www.aafa.org/ragweed-pollen/>

How far can wind-borne pollen be disseminated? – Science Direct

<https://www.sciencedirect.com/science/article/abs/pii/S0021870749900593>

What Eats Mosquitos? <https://www.terminix.com/pest-control/mosquitoes/what-eats-mosquitoes/>

Healthy Lawns

<https://www.scotts.com/en-us/library/spreaders-mowing-tools/how-mow-lawn-lawn-mowing-tips-tricks>

Lawns may be green, but they're terrible for the environment

<https://ggwash.org/view/72499/lawns-are-good-for-almost-nothing-environment-eco-landscaping>

Mowing High For Grub and Weed Control

https://www.canr.msu.edu/news/mow_high_for_weed_and_grub_control

How to Calculate the Carbon Footprint of Your Lawn Mower

<https://sciencing.com/how-to-turn-everyday-objects-into-science-experiments-13763823.html>

Simple Guide to Creating A Healthy Lawn

<https://www.beyondpesticides.org/assets/media/documents/pesticidefreelawns/resources/Read%20Your%20Weeds-Organic%20Lawns.pdf>

Big buzz about program to turn lawns into pollinator habitat

<https://www.mprnews.org/story/2019/08/15/big-buzz-about-program-to-turn-lawns-to-pollinator-habitat>