



# Catoctin News

Newsletter of the Catoctin Group serving  
Carroll and Frederick Counties

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## Forestry Not Well Understood by Marylanders

By Jonathan Kays

University of Maryland Extension Specialist

***The research shows that most Marylanders are unfamiliar with the economic and employment impact of the state's agriculture and forestry industries.***

In summer 2018, the University of Maryland Harry R. Hughes Center for Agro-Ecology commissioned Opinion Works, an Annapolis research firm, to conduct a representative statewide survey measuring Marylanders' agricultural literacy. Additional insight was gained through a series of focus groups. The survey crystallized the views of Marylanders toward farming and forestry. It found that Marylanders have many connections to agriculture and highly favorable views toward farming in the state. However, residents are less knowledgeable about forestry. The purpose of this article is to highlight the views about forestry found in the report.

[Click here to read the full report.](#)

### Forestry is an Undefined and Unknown Industry in Maryland

Forestry is much less defined in people's minds than farming. The public has a hard time picturing forestry professionals and do not know what wood products are produced in Maryland.

- Marylanders are typically at a loss to describe or picture the forestry industry, or the type of people who work in it.
- If they did have a picture in mind, interviewees immediately described park rangers, rather than foresters.
- Consumers' favorability ratings for Maryland's forestry industry, which includes forest growers, loggers, and mills, was lower than farming.
- The difference was not due to negativity towards forestry, but to more people who said they were "neutral" or not sure about what defines or comprises the industry.

- The lack of definition and awareness around forestry was also evident in the analysis of consumer decision-making.

### Forestry is Associated with Sprawl and Loss of Woodland

For consumers in the populous communities of Central Maryland, harvesting trees creates the specter of animals and birds losing habitat or woodlands being replaced for development. In fact, trees are a renewable resource, requiring management for pests and invasive species. The vast majority of forestry in Maryland is not linked to development.

- Forests cover 38 percent of Maryland; over 2 million acres. The number of forested acres is increasing and new forest growth has offset developed land.

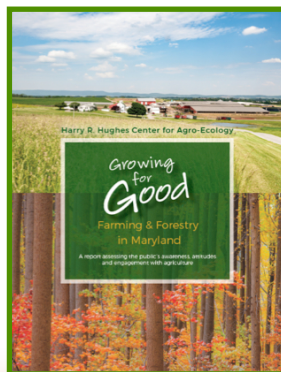
- 66% of Maryland residents agreed that "responsible harvesting of forests is vital to Maryland's economy."

- But only 41% agree that forests would be healthier if they were more actively thinned and managed for pests.

- Nearly four in ten Marylanders (38%) agreed with the statement, "I would prefer that there be no logging in Maryland's forests," while only 12% disagreed. The other half reserved judgment, saying they were neutral or not sure.

### Marylanders are Surprised by the Economic Impact of Agriculture and Forestry

The research shows that most Marylanders are unfamiliar with the economic and employment impact of the state's agriculture and forestry industries. Knowing its contributions, positively influences their opinion of agriculture.



*Growing for Good: Farming and Forestry in Maryland, a statewide survey measuring Marylanders' agricultural literacy.*

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- Three-quarters of all Marylanders (74%) are surprised to learn that agriculture is the state's largest commercial industry, supporting 350,000 jobs.
- Most (62%) said the statement made them feel more positive toward Maryland agriculture.
- Hearing that "Maryland forestry contributes \$4 billion to the state's economy, employs 10,000 people, and pays \$26 million in taxes annually" surprises the majority of residents (86%). Knowing this, makes 55% feel more positive about Maryland forestry.

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<http://extension.umd.edu/woodland/subscribe-branching-out>

- Marylanders are readily willing to believe that farmers are good environmental stewards.
- The economic impact of these two industries surprises Marylanders. The size and economic impact makes them feel much more positive.

When presented with these facts about the environmental and economic benefits of farming and forestry, Marylanders respond positively. 1) Maryland foresters manage woodlands for clean air, clean water and healthy wildlife habitat; 2) Forestry in Maryland produces wood for furniture, paper, biofuels and home building; and 3) forestry is a major employer in rural counties.

## Improve Soil Health to Act on Climate

By Barb Trader

Healthy Soils Frederick Facilitator

Soil health is a critical tool in reducing and reversing the impacts of climate change. Improving soil health has great potential for making a huge impact – so much so that Drawdown (2017) ranks regenerative agriculture, a set of practices focused on improving soil health, as one of the most impactful ways to draw carbon out of the atmosphere.

Regenerative agriculture is critically important too, as a climate solution. Agriculture is a major business in Maryland, with about two million acres in production. The state of Maryland and a number of its farmers are viewed as leaders in restoring soil health by virtue of wide-spread use of two soil building practices; no-till and cover crops. As helpful as these practices are, they do not adequately address the serious and multiple challenges our region is experiencing and will increasingly face the changing climate, such as altered growing seasons, more frequent and intense storms, increased productivity demands on less acreage, threats to drinking water, and increased risks to the Chesapeake Bay.

To buy produce and meats from local regenerative farmers, check out the directory at <https://www.futureharvestcasa.org/amazing-grazing-directory>. Learn more about regenerative agriculture and its importance in addressing the climate crisis here:

- One Hundred Thousand Beating Hearts: <https://www.youtube.com/watch?v=UoQWLK8-CYE>
- Ron Holter Dairy Farm, Frederick, MD: <https://www.youtube.com/watch?v=EZVkiH8ixQ4>
- Farmer's Footprint, [www.farmersfootprint.us](http://www.farmersfootprint.us)
- Future Harvest CASA, [www.futureharvestcasa.org](http://www.futureharvestcasa.org)
- Savory Institute, <https://www.savory.global/>

It's not just farmers who can help solve the climate crisis through better land management decisions. Any landowner – homeowners, businesses, churches, schools, and public parks – can adopt practices with intention to improve soil health. This fact sheet (Following pages 3, 5) describes five regenerative agriculture principles that guide decision making about land management that any landowner can implement.



Photo: Soil Carbon Initiative

Healthy Soils Frederick has worked together during the past year to explore policy and program ideas that would speed up a transition from traditional commodity row crop farming to regenerative agriculture. Our members helped pass new legislation, sponsored by Senator Ron Young, to adjust the Maryland

Agriculture Cost Share program (HB687/ SB597), that is now headed to the Governor for his signature. This bill will make state funds available to pay for costs associated with a transition to regenerative practices, such as installation of grazing "systems" for rotational grazing, upland tree plantings, hedgerows, windbreaks, silvopasture, and other practices.

## WHAT IS REGENERATIVE AGRICULTURE AND WHY IS IT IMPORTANT FOR FREDERICK COUNTY?

### FREQUENTLY ASKED QUESTIONS

By Barb Trader  
Healthy Soils Frederick Facilitator

#### WHAT IS REGENERATIVE AGRICULTURE?

Regenerative agriculture is a set of practices that farmers and ranchers use in land management decisions that “regenerate” healthy soil biology. Home owners and parks managers can also adopt regenerative land management practices.

#### WHAT ARE HEALTHY SOILS?

Healthy soils are continually improving; they regenerate, maintain and support the living ecosystem of beneficial soil microbes and build soil organic matter, which in turn, improves plant health, crop productivity, and nutrient density.

#### WHY FOCUS ON HEALTHY SOILS NOW?

Soil scientists estimate that in 50 years, we will no longer have sufficient arable topsoil to feed the world’s population. Agricultural research and conservation practices are emphasizing soil biology characteristics to meet the future food needs for growing healthy, nutritious food while improving soils for carbon sequestration and water retention.



#### WHY IN FREDERICK COUNTY?

- We can do our part with the 180,000 acres of agricultural production in Frederick County.
- Frederick County is projected to experience more intense storm events and longer periods of drought. Healthy soils maintain higher productivity in extreme weather events.
- Frederick County needs a sustainable solution for achieving water quality goals required by the Clean Water Act. Improving soil health on agricultural land has proven to be a cost effective solution to meeting water quality goals.

#### WHAT ARE THE FUNDAMENTAL LAND MANAGEMENT PRACTICES FOR DEVELOPING HEALTHY SOILS?

The National Resources Conservation Service, USDA, defines four core soil health principles that are used in regenerative agriculture ([https://www.nrcs.usda.gov/wps/PA\\_NRCSCconsumption/download?cid=stelprdb1049264&ext=pdf](https://www.nrcs.usda.gov/wps/PA_NRCSCconsumption/download?cid=stelprdb1049264&ext=pdf)). Regenerative agriculture adds principle 5, an extension of principle 4, which focuses on diversity. **Taken together, farming and grazing practices that are regenerative are defined by five core principles:**

- 1. Armor the soil** — Cover soil at all times to prevent erosion, retain moisture, and maintain soil temperature.
- 2. Minimize disturbance** — As much as possible, limit tilling of soil, herbicides, fertilizers, pesticides and fungicides; these inputs negatively impact soil biology and soil structure. Organic matter in soil is the habitat for soil biology. Soil biology provides microbial glues to help form soil “aggregates”, resulting in soil structure and porosity.

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**3. Maintain a growing root as much as possible** — This growth improves and maintains photosynthesis, which provides liquid carbon to soil biology and establishes a symbiotic relationship between the plant and the soil.

**4. Diversify as much as possible** — Different plants have different rooting depths which improves soil biology habitat, critical for nutrient cycling. Nutrient cycling provides the nutrients needed for crops and limits necessity of external inputs, like chemical fertilizer.

**5. Add livestock and implement rotational grazing** — moving ruminant animals frequently to different sections of pasture mimics dense wild herds on the move. Livestock confined to small parcels for short periods of time disturb plants and the soil in positive ways, stimulating regrowth and building soil fertility. Land managed this way develops deeper root systems which feed soil microbes and build the “soil carbon sponge.” Working together, livestock, plants, and microbes increase soil organic matter, sequester more carbon in the soil, increase water retention, reduce farm inputs, reduce nutrient management issues and grow healthier food for human consumption.

## HOW DO HEALTHY SOILS IMPROVE AGRICULTURAL PRODUCTION?

Farmers who concentrate on improving soil health report improvements in crop production because of multiple factors (see case studies: <https://farmland.org/soil-health-case-studies/>). Healthy soil retains more water, making crops more resilient in heavy storms and drought conditions. Improved and diversified soil biology improves nutrient cycling, making nutrients available for plant growth. Covered soil maintains cooler temperatures in summer months, providing more moisture to support plant growth.

## HOW DO HEALTHY SOILS IMPROVE WATER QUALITY?

Healthier soil contains more organic matter. For every 1% increase of organic matter, soil can retain more than 20,000 gallons of water per acre, limiting and preventing stormwater runoff and improving water filtration.

## HOW DO HEALTHY SOILS REDUCE GREENHOUSE GASES?

- Healthy soils and plant biomass store large amounts of carbon.
- Healthy soils require far less chemical fertilizer, made with nitrous oxide, a greenhouse gas 300 times more potent than carbon dioxide. Agriculture is responsible for 75% of nitrous oxide greenhouse gas emission.
- Reduces energy consumption by 30–70% per unit of land through reduced synthetic fertilizers, and by using internal farm inputs, thus reducing fuel used for transportation.

## HOW DO HEALTHY SOILS FIGHT CLIMATE CHANGE?

- Regenerative agricultural is listed as one of the most effective ways to slow/reverse global warming according to *Drawdown*, 2017.
- Regenerative practices help restore local water cycles, which benefit the local climate and is an important factor in reversing global warming.
- Regenerative agricultural practices reverse climate change by rebuilding soil organic matter and restoring degraded soil biodiversity, resulting in both carbon drawdown and improvement of the water cycle. ([www.regenerationinternational.org](http://www.regenerationinternational.org))



# Lawns: Time for a Second Look

By Mark Gregory



**Spring** is approaching. For many people, it's time to think about what to grow. Question: What is the most abundant crop grown in the US? You may guess wheat, corn, soybeans? Scientific American states, "lawns are the most grown crop in the US ... one that no one can eat". <sup>(1)</sup>

According to Lawn People: How Grasses, Weeds, and Chemicals Make Us Who We Are; calculations from air photography and tax assessments show 23% of urban areas are covered in turf <sup>(2)</sup>. Standard grass lawns are very expensive. They require more equipment, labor, fuel and use more agricultural toxins than industrial farming, making them the largest agricultural sector in the US <sup>(2)</sup>. According to the Economic Research Service, Americans invest roughly \$60 billion a year in the turf grass industry <sup>(2)</sup>. A Swedish study showed using a gas mower for an hour has the same carbon footprint as a 100-mile car trip <sup>(2)</sup>. The EPA estimates that hour-for-hour, gas-powered mowers produce 11 times as much pollution as a new car <sup>(2)</sup>.

History shows lawns and expansive green spaces began in the 18th century, on nobility's country estates in France and England. It became a sign of wealth and higher socio-economic status. American lawns didn't become popular until after the Civil War. With increasing prosperity, richer people looked to display more symbols of material wealth. It has been said a lawn's primary purpose is to make us look and feel good about ourselves <sup>(1)</sup>. Abraham Levitt revolutionized the home building industry, by altering much of the landscape of the Eastern US with massive suburban communities. He described the fixation with lawns as "A sweeping exercise in conformity" <sup>(3)</sup>.

Let's face it, lawns take up too much time, effort, and money. Home owners may enjoy having vast lawns for kids or pets to play on, but I hope people will feel compelled to take a closer look at cutting back or eliminating lawns in the face of today's existential climate crisis. I personally regret the intrusion a lawn had on my once busy life. Most lawns need some form of seeding/reseeding, aerating, mowing, edging, and cultivation with fertilizer, pesticides, and herbicides, as well as using precious water resources.

Xeriscaping is the practice of designing landscapes to reduce or eliminate the need for water <sup>(4)</sup>. In Novato, Ca, residents were offered a reduction in water bills, to convert from lawns to xeriscaping. Houses that participated saved an estimated 120 gallons per day <sup>(4)</sup>. Natural landscaping can be beautiful, better for the environment and better for area wildlife.

Why not decide what NOT to plant or cultivate this year? Consider eliminating or progressively eliminating your lawn. It's a chance to be creative and design new, exciting outdoor spaces. You can just let progressively greater parts of your lawn go wild; or gradually convert lawn space to perennials, ground covers, mulch, or rock features. Try planting some shrubs, bushes, or trees. Plant a patch of your favorite vegetables, herbs, or fruit trees. What about a bird feeder, bird bath or a garden sculpture? The possibilities are endless. Not only can it save you time, work, and money; it just might help save our planet as well. It is a high price we all pay to maintain today's current culture of growing lawns.

<sup>(1)</sup> Scientific American; "The American Obsession with Lawns", Krystal D'Costa; May 3, 2017.

<sup>(2)</sup> "ONE", (Only Natural Energy); "Grass Lawns are an Ecological Catastrophe"; Oct-Dec 2018.

<sup>(3)</sup> Wikipedia: Abraham Levitt founded Levitt and Sons, a real estate company famous for building the town of Levittown, New York.

<sup>(4)</sup> Xeriscaping: National Geographic resource Library; Jan 21, 2011.



Photo Pinterest: Grassless No Mow Yards

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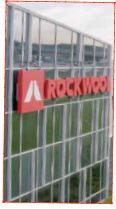
## Further Information

<http://www.sierraclub.org/maryland/catoctin-group>

# An Update on Rockwool

*—No, it's Not a Done Deal—*

By Dr. Christine Wimer  
President, Jefferson County Foundation, Inc.



**Heavy industry** and its toxic and hazardous emissions are an existential threat to our region. Jefferson county residents and allies from the surrounding area have been fighting a Danish-based multinational company in the heart of Jefferson County: Rockwool. Rockwool will produce insulation by melting a variety of types of rock with heat from coal and natural gas, spin it into wool and bind it with a variety of chemicals to make insulation.

Residents are concerned about how this plant ever got sited here in the first place, and even more about its risk to air quality, potential for water contamination, and other hazards to the environment.

Rockwool's permit states it will emit 392 tons of hazardous air pollutants per year. This is a major risk, in part, because it is across the street from an elementary school. In West Virginia, although a school would not be permitted to build so close to a plant with such emissions, the reverse is not true — the same restrictions don't prohibit heavy industry locating so near to a school. These air emissions will also have a negative impact on the agriculture, equine and tourism industries in Jefferson County. Some of these air emissions will reach Maryland and Virginia as well. Flaws in the air modeling and permitting have led to underestimation of emissions and their effect on local and regional air quality, as well as inappropriate control mechanisms.

This plant is also sited on karst hydrogeology, at high risk for sinkholes development. The storm water and process water ponds on the property have a significant risk of failure and subsequent contamination of the groundwater. Dye studies have shown groundwater directly communicates

with several surface water structures that lead to the Potomac River and, therefore, the water source of Maryland and Virginia.

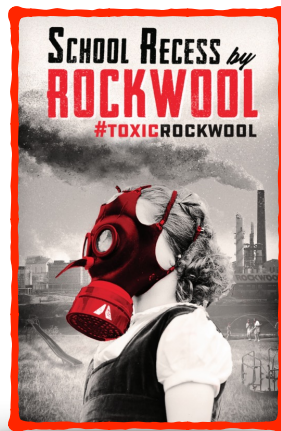
Rockwool asserts that it has all of its' permits, that it is 70% built, and there is no chance of stopping it. This is simply not true. Rockwool does not have all the permits it needs and there continues to be many legal and administrative challenges to the zoning, construction, and permitting of the Rockwool facility.

In spite of local electoral and administrative successes against Rockwool, the State has stepped in to usurp local opposition and provide whatever Rockwool needs, including a \$150 million bond agreement with tax abatements.

While the state of West Virginia has historically chosen the needs of mining and heavy industry over the health and welfare of its environment and residents, Jefferson County has worked hard to remain bucolic, agricultural, and residential. We have no intent of backing down. Stand with us to help protect your natural resources from this threat.

If you are interested in keeping abreast of developments regarding Rockwool, please visit our website at [jeffersoncountyfoundation.org](http://jeffersoncountyfoundation.org).

Ranson, WV-based Jefferson County Foundation is a 501(c)(3) non-profit organization that educates and advocates for effective and accountable government, sustainable development, and protection of health, heritage, and the environment. The Foundation's current priority focus is ensuring the accountability of all government entities that are involved in and responsible for the location, construction, permitting, and operation of the proposed Rockwool industrial facility in Jefferson County.



Poster photo: 350Loudin  
Apis Graphic Photo  
Climate



***Treat the earth well: it was not given to you by your parents, it was loaned to you by your children. We do not inherit the Earth from our Ancestors, we borrow it from our Children.***