



ORGANIC MATTER MATTERS



Summit for Recycling - Grand Junction, Colorado - June 2nd-4th, 2025

Speakers



Clinton Sander
A1 Organics



Rutger Myers
EcoCycle

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Organic Matter Matters

Rutger Myers, Eco-Cycle

About Me

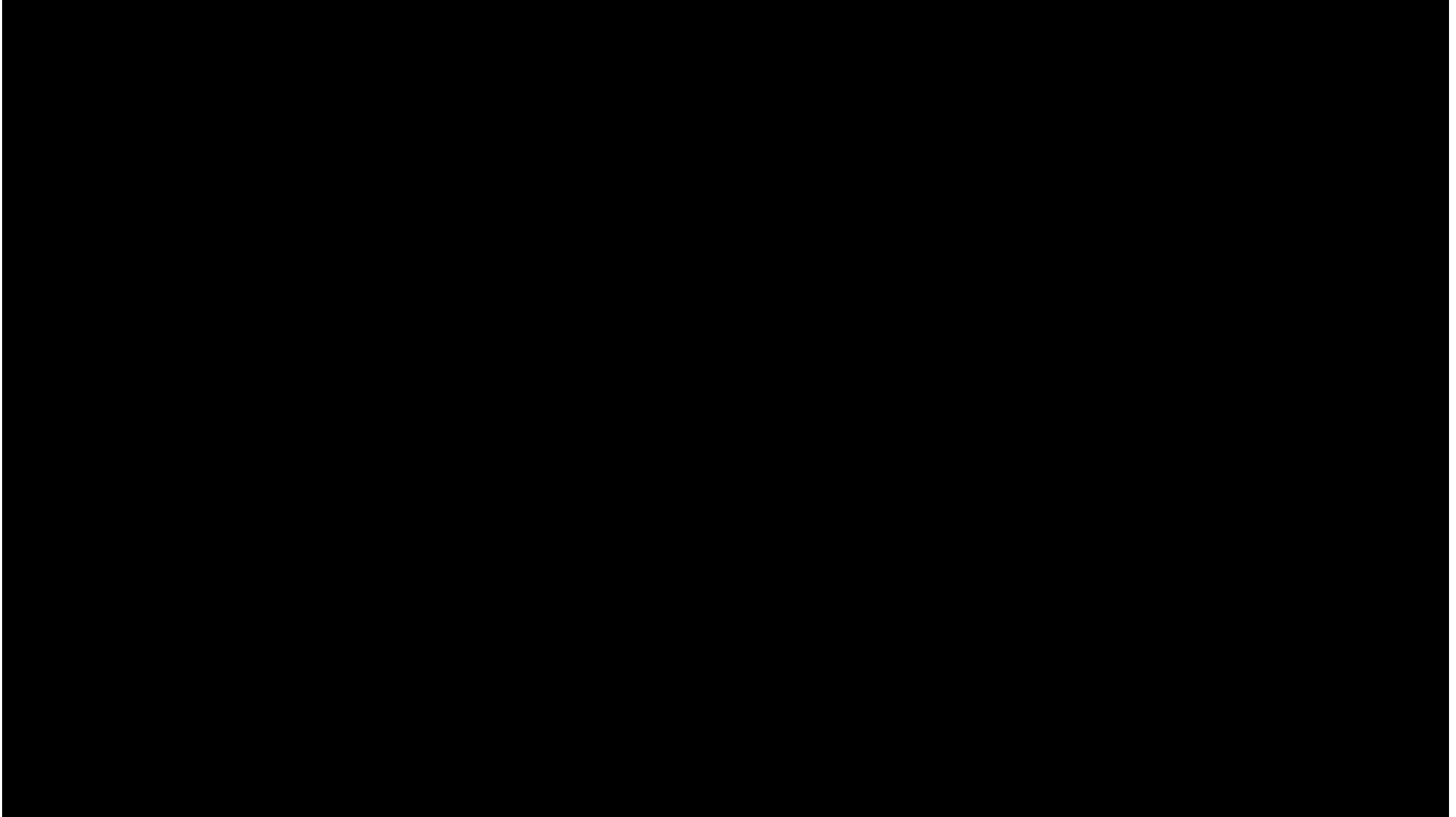




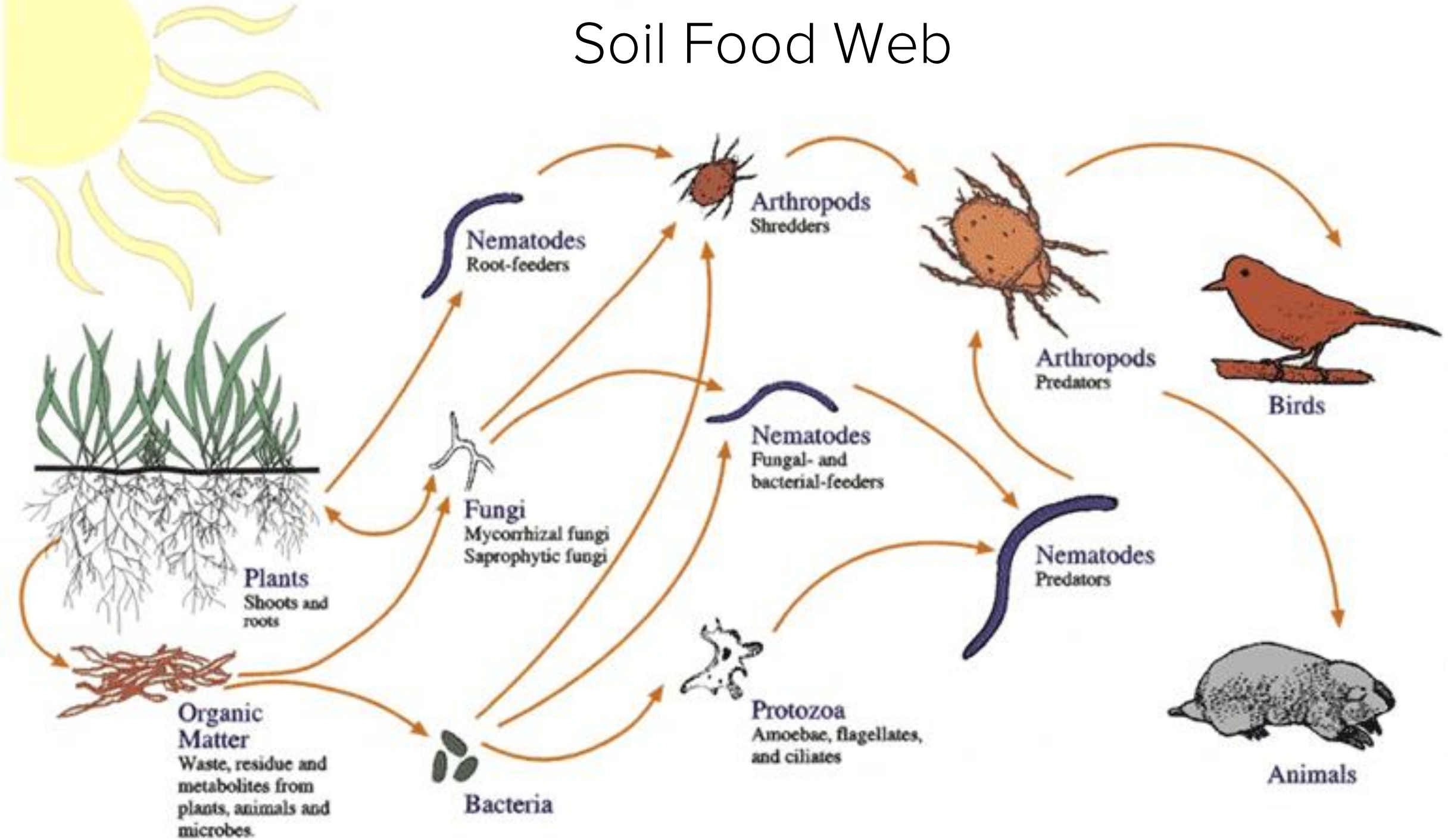
eco-cycle®
Building Zero Waste Communities

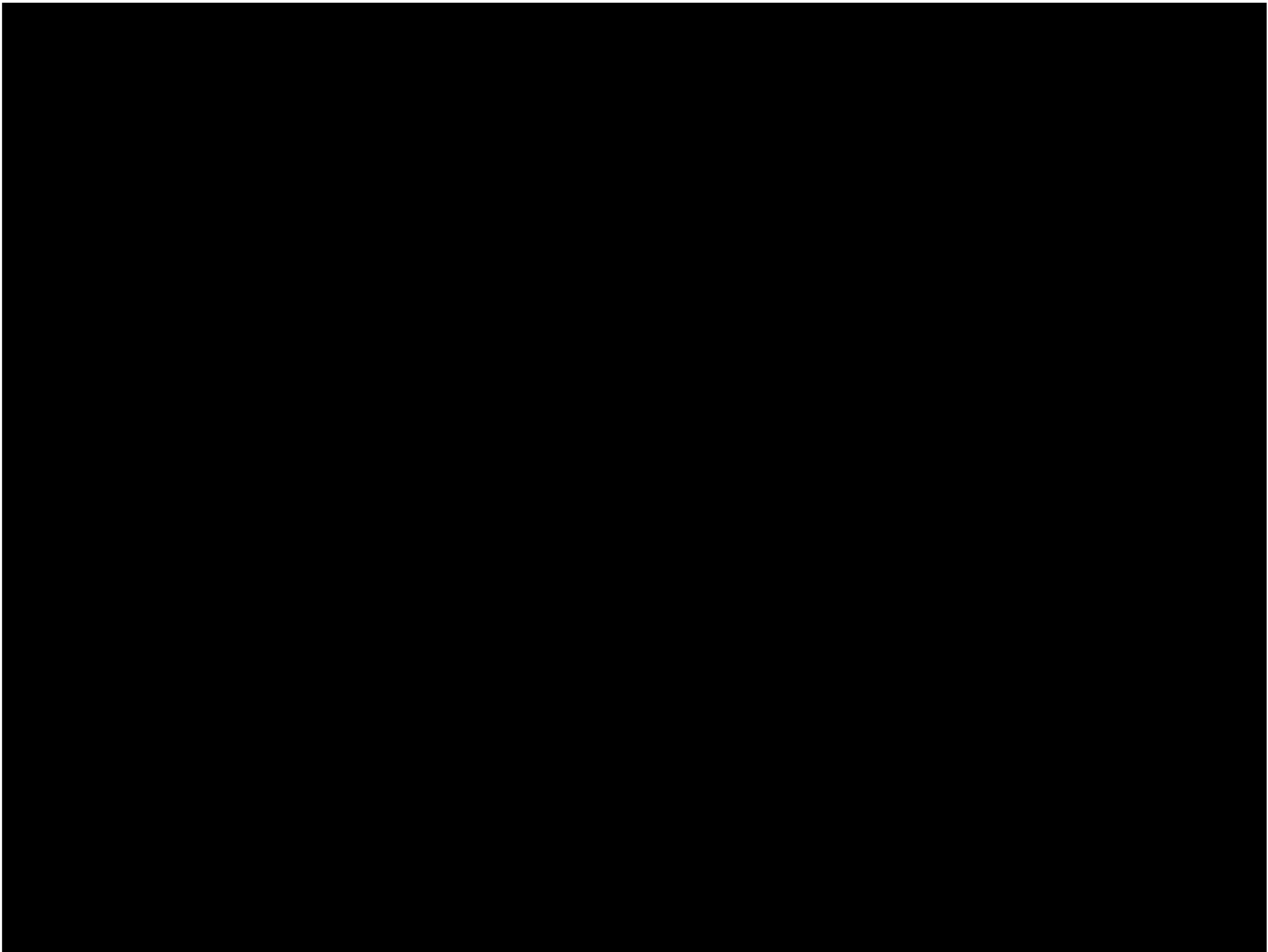


Why is composting so hot?



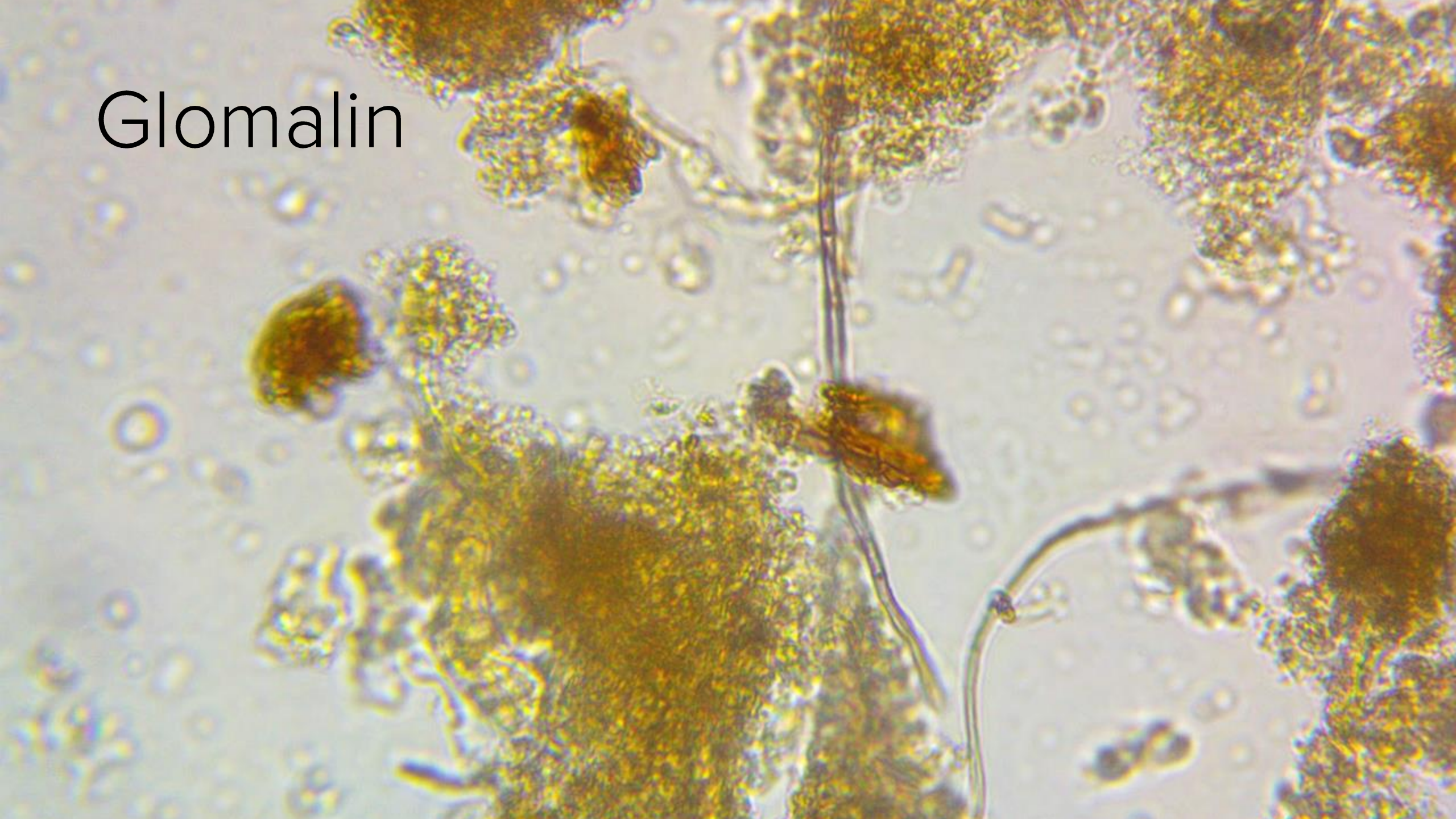
Soil Food Web

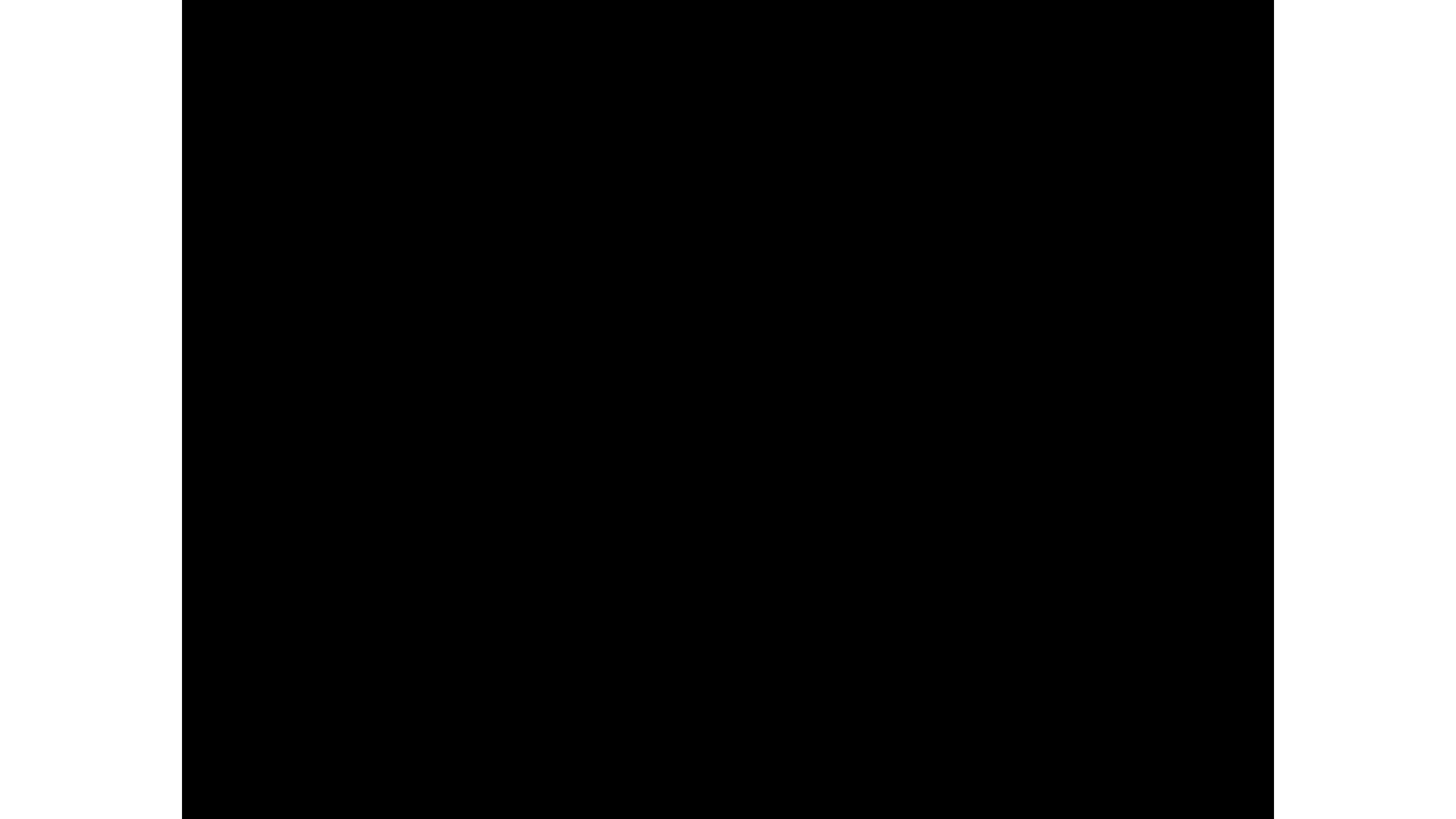


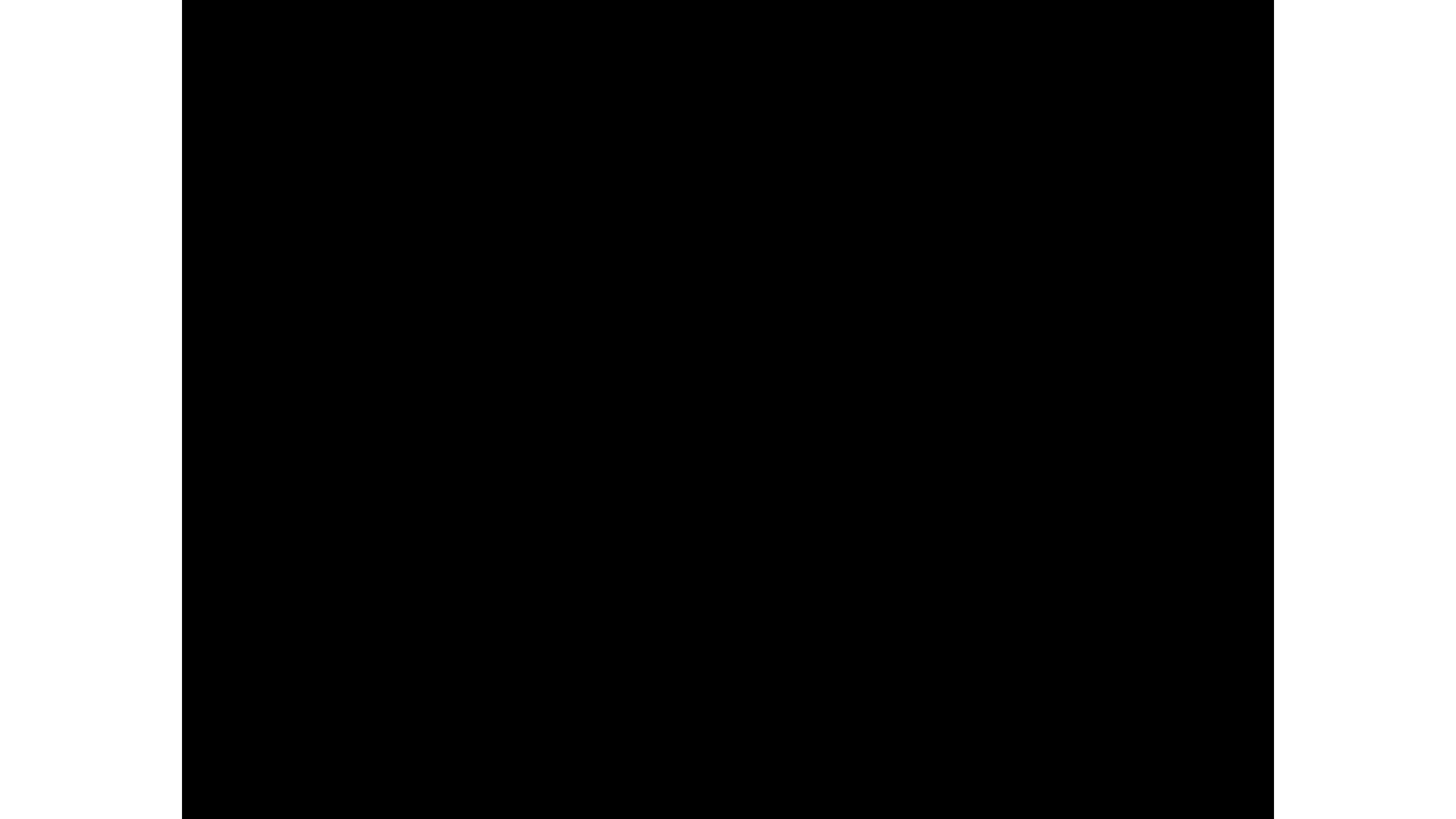


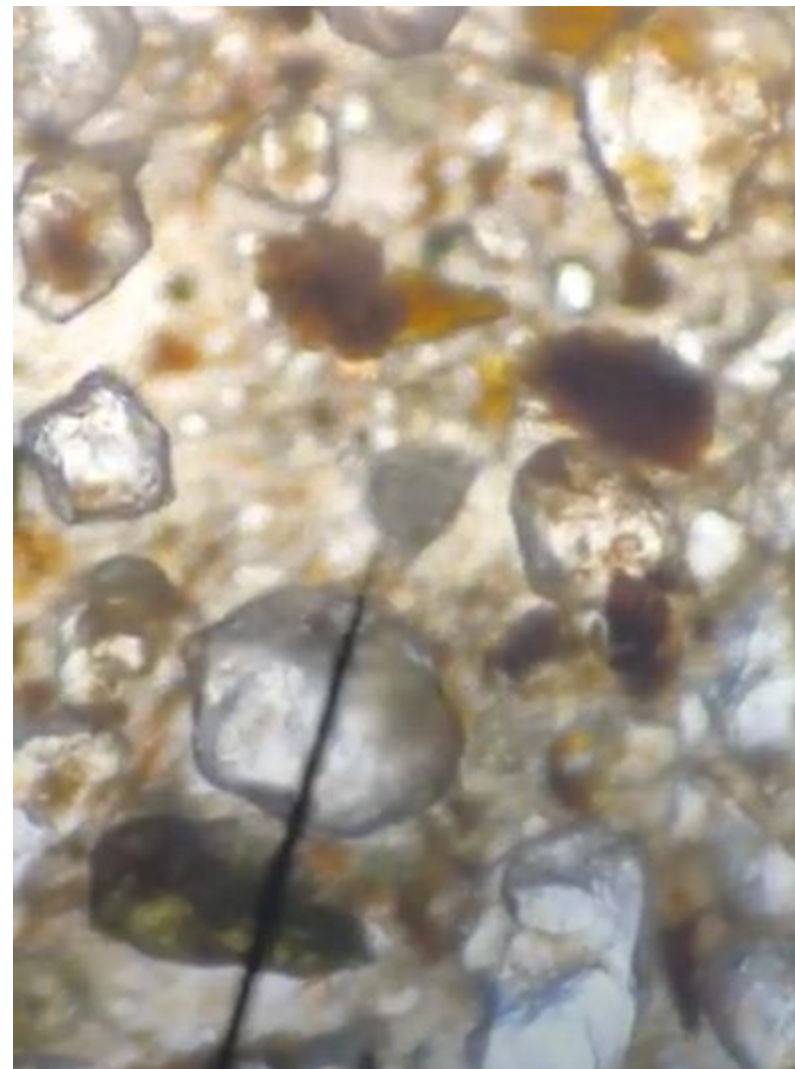


Glomalin

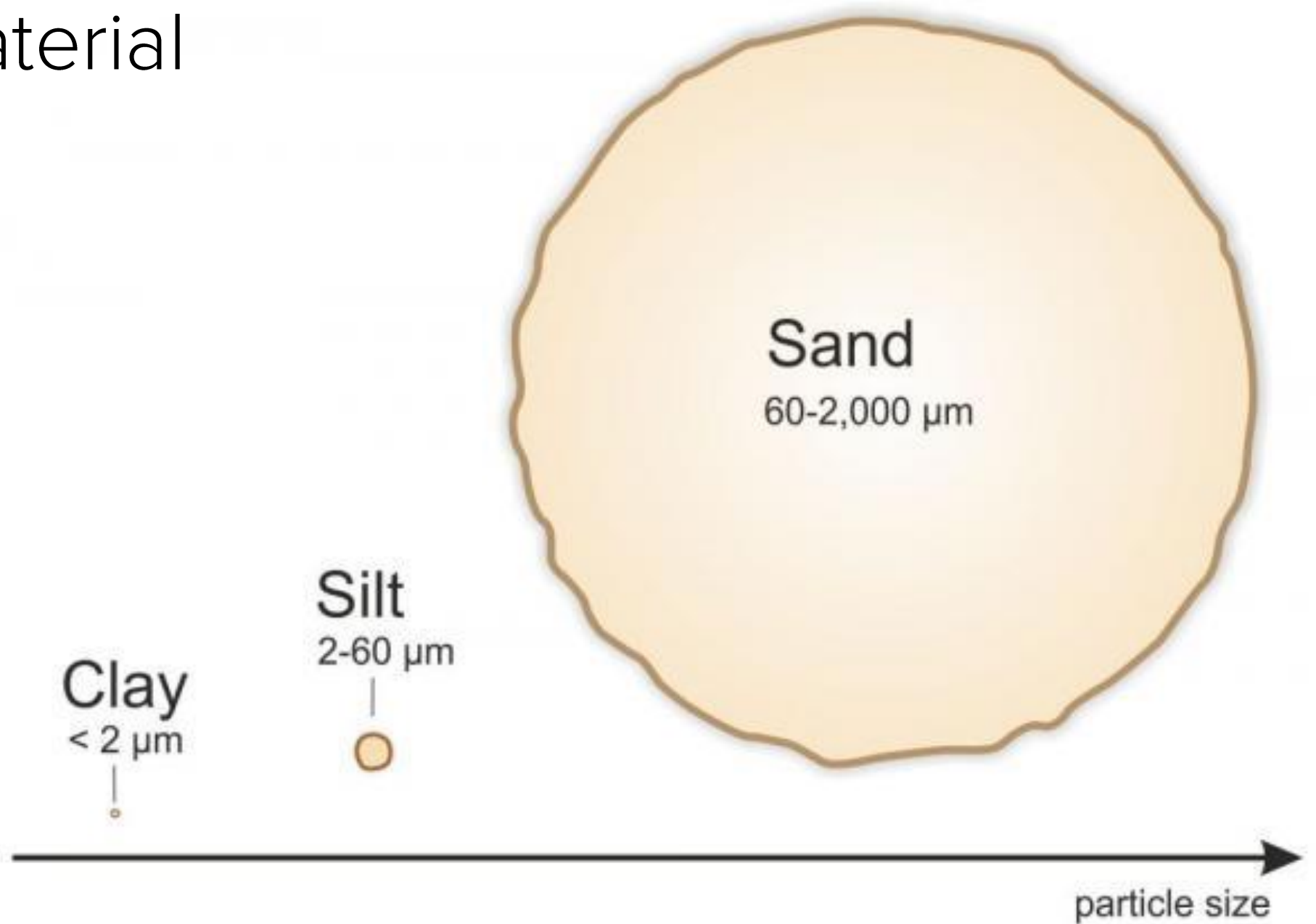




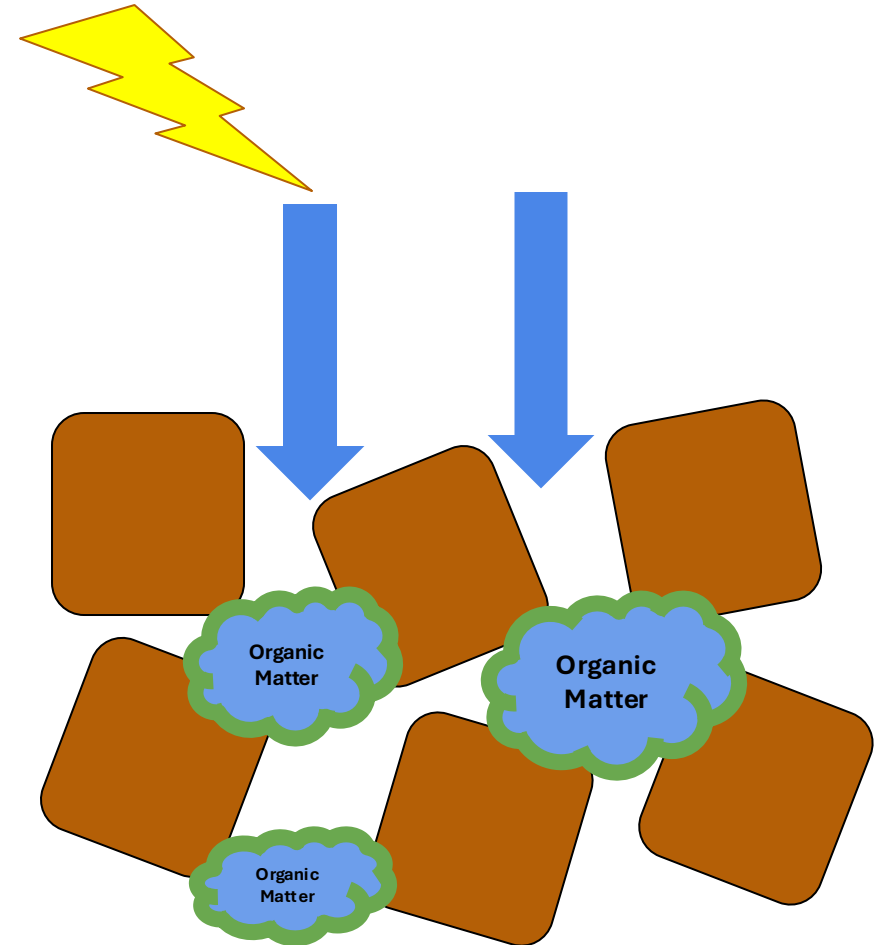
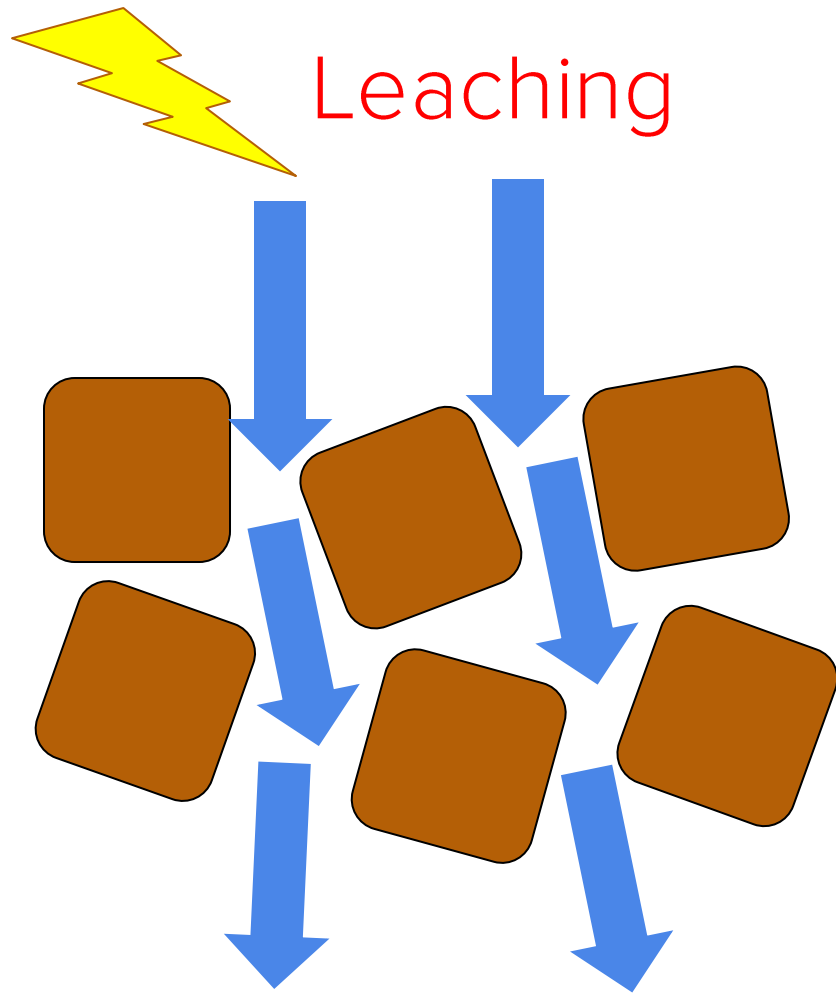




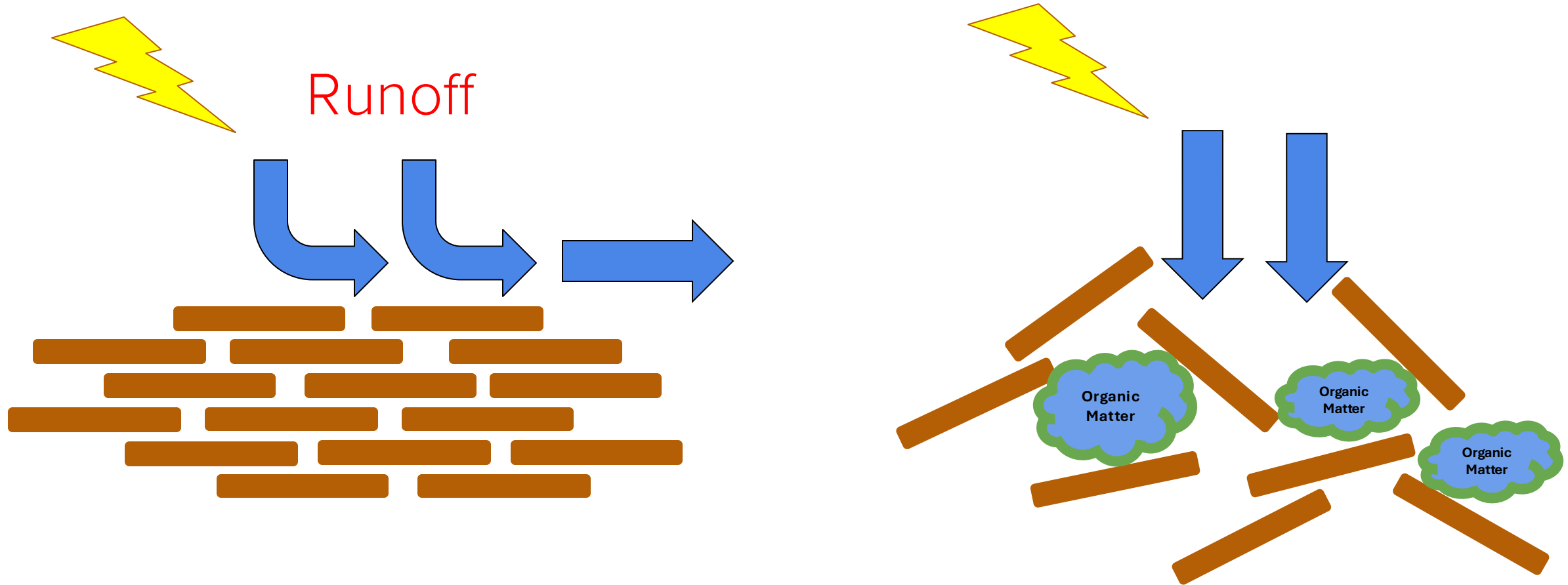
Parent Material



Organic Matter in Sand



Organic Matter in Clay





Infiltration Rate



Water Holding Capacity

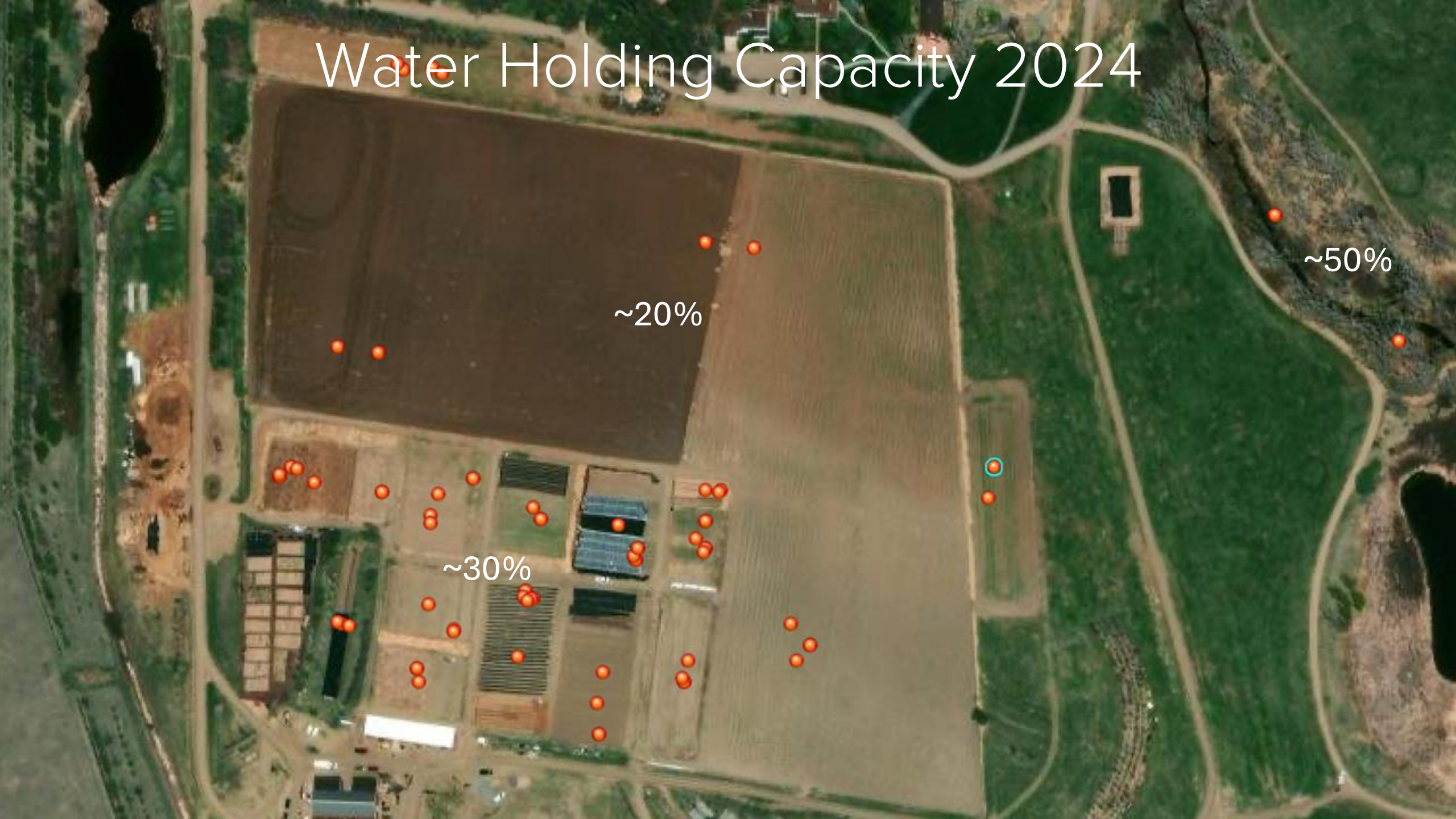


Water Holding Capacity 2024

~20%

~50%

~30%



Aggregate Stability



Aggregate Stability 2024



Worm Count



Worm Count 2023



It Matters



A landscape photograph showing a large pile of dark, organic material, possibly compost or mulch, in the foreground. A thick plume of white steam or smoke rises from the pile, partially obscuring the background. In the distance, a hot air balloon is visible in the sky, and a utility pole stands near the center. The ground is covered with dark, textured material, and some sparse vegetation is visible in the background.

Thank you!

Rutger Myers
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COMPOST

ORGANIC MATTER MATTERS

Clinton T Sander – A1 Organics – Marketing Manager

“The nation that destroys its soil destroys itself.”

President Franklin D Roosevelt – 1937



ME

CLINTON T SANDER
MARKETING MANAGER



SOIL = FOOD = HEALTH



A1 ORGANICS

- OVER **50 YEARS** IN THE ORGANICS RECYCLING and SOIL AMENDMENT INDUSTRY
- Colorado's first fully permitted Organics Recycling Facility 1996
 - "Lost Antlers" Golden, Colorado
- Current Facilities: Eaton, Keenesburg, Commerce City, Englewood
- Over 500 acres of processing sites
- 45 full time employees
- **34,000,000 gallons of fat, oils, greases, and liquid food residuals.**
- **525,000 tons per year diverted from disposal to recycling**
- 410,000 cubic yards of compost, mulch, soil products sold annually
- Colorado Environmental Leadership Program - Gold Level Partner for 6 years
- USCC Composter of the Year
- Recycle Colorado: Colorado's Best Commercial Diversion Program

THE ORGANIC RECYCLING SOLUTION
FOR A SUSTAINABLE COLORADO

CLINTON SANDER

MARKETING MANAGER

CLINTONSANDER@A1ORGANICS.COM





LAMBLAND INC 1980





A1 ORGANICS EATON

80 ACRES

28,000 Tons Processed annually
Organics include commercial food,
liquids, yard trimmings.





A1 ORGANICS KEENESBURG

420 ACRES

428,000 Tons Processed Annually
organics include, Food Scraps, Yard
Trimmings, Liquids, and Biosolids



KEENESBURG, CO
425 ACRES

A1 ORGANICS SHERIDAN & COMMERCE CITY



Combined 22 ACRES
Yard Trimmings
Log
Soils & Sod



CLOSING THE COMPOST LOOP

1. DIVERSION

The first step involves redirecting organic waste away from landfills, segregating green and brown materials to set the foundation for an environmentally conscious composting journey.

3. SOIL AMENDING

The matured compost takes center stage as it is tested and incorporated back into a garden, park and agricultural soils.

2. COMPOSTING

Combining nitrogen-rich green materials and carbon-rich brown materials, this phase catalyzes the controlled decomposition process, orchestrated by microorganisms, generating heat and transforming organic waste into nutrient-rich compost.

4. RESTORE

The nutrient-enriched soil benefits from enhanced water retention, nutrient levels and provides a sustainable and organic boost for optimal plant growth restoring and revitalizing landscapes, and completing the compost loop over multiple years.



Benefits of Compost Application & Organics Recycling

1. Improved Soil Health

- **Increased Organic Matter:** Compost enriches soil with organic matter, improving soil structure, porosity, and aeration.
- **Enhanced Microbial Activity:** Provides a habitat for beneficial microorganisms that aid in nutrient cycling and disease suppression.
- **Improved Water Retention:** Compost helps soil retain moisture, reducing irrigation needs.

2. Enhanced Nutrient Supply

- **Slow-Release Nutrients:** Provides a steady release of essential nutrients like **nitrogen**, **phosphorus**, and potassium.

3. Erosion Control

- **Compost improves soil aggregation**, making soil less prone to erosion by wind or water.

4. Improved Plant Growth

- Enhances root development and overall plant health.
- Improves resistance to pests and diseases due to better soil conditions.

5. Carbon Sequestration

- Compost application helps sequester carbon in the soil, reducing greenhouse gas emissions and mitigating climate change.

6. Reduction in Waste

- Diverts organic waste from landfills, reducing methane emissions and promoting sustainable waste management practices.

7. pH Balancing

- Acts as a buffer to help stabilize soil pH, making it more suitable for diverse crops.

8. Reduction of Soil Contaminants

- Compost can bind heavy metals and other contaminants, reducing their availability to plants.

9. Cost Savings

- By reducing the need for chemical fertilizers, pesticides, and irrigation, farmers can achieve long-term economic benefits.

10. Closing the Compost Loop

- Methane produced from decomposing organics in landfills is 16% of the country's methane emissions. US EPA





NUTRIENT AVAILABILITY

- **Slow-Release Macro & Micronutrients**
- Compost provides a balanced supply of **essential nutrients** (nitrogen, phosphorus, potassium, and micronutrients) in forms that are slowly released over time, reducing nutrient leaching.
- This gradual release matches plant uptake, ensuring nutrients are available throughout the growing season, also into following seasons.
- High Soluble Salts can be problematic to root growth & microbial activity. (we are moving out).
- Again, with Compost not all available Nitrogen is immediate.
 - Chemical vs Natural – Chemical is immediate “One & Done”. Natural is stable and releases over time preventing leaching and improving soil.



SOIL STRUCTURE

- Balances Soil Density.
- Compost helps plant growth by **balancing soil density**. In soils that are too tight, compost helps to loosen the soil; whereas in soil that is too loose, it helps to clump it together. This balancing allows plants to develop healthier roots into the soil contributing to healthier growth.
- Another way to explain this is Heavy Soil is not good soil. Adding organic matter changes the way heavy is organized. **Organic matter works as glue**, sticking heavy particles together into aggregates, creating more structure and space, for a lighter soil.
- Additionally stable soil stays in place protecting against the movement of additional nutrients.



BIODIVERSITY

Enhances soil **biota** population and diversity.

How:

Compost provides a good food source for beneficial soil and plant microbes, increasing their population, as well as the population of creatures that feed upon them (e.g., worms).



Organic Matter MATTERS

**90–100% per
cubic yard.**

An aerial photograph of a soccer field. A large, dark, rectangular area of the field is being spread with a dark substance, likely soil or organic matter, by a small truck. The rest of the field is green grass with white yard lines. There are several soccer goals visible around the field. A paved path runs along the right side of the field.

INCREASING ORGANIC MATTER

The quickest, most effective, & sustainable way to increase OM is directly adding it to the soil.



A1 ORGANICS



COMAND[®]

TURF



MICROBIAL POWER: THE COMAND COMPOST CHRONICLES

City of Greeley, Monfort Park Athletic Fields



TOP DRESS APPLICATION MAY 23RD, 2024



BEFORE



COMPOST APPLICATION:

Certified COMAND[®] Compost spread at 1/8" over athletic fields. One main field was aerated prior to application for fast soil incorporation. Irrigation was immediately ran after top dressing in all areas to assist in incorporation. Notice rich green areas of improved turf health in less than four weeks. Activity continued on fields as restoration began. The power of COMAND!

TURF RECOVERY ONE MONTH AFTER APPLICATION - JUNE 17TH, 2024



AFTER





COMPOST APPLIED IN THE FALL. GRASS GREEN UP PRESRING. NO WATER



EATON COMMUNITY CENTER
BASEBALL FIELDS
TOP DRESSED – ½" per 1000 sqft


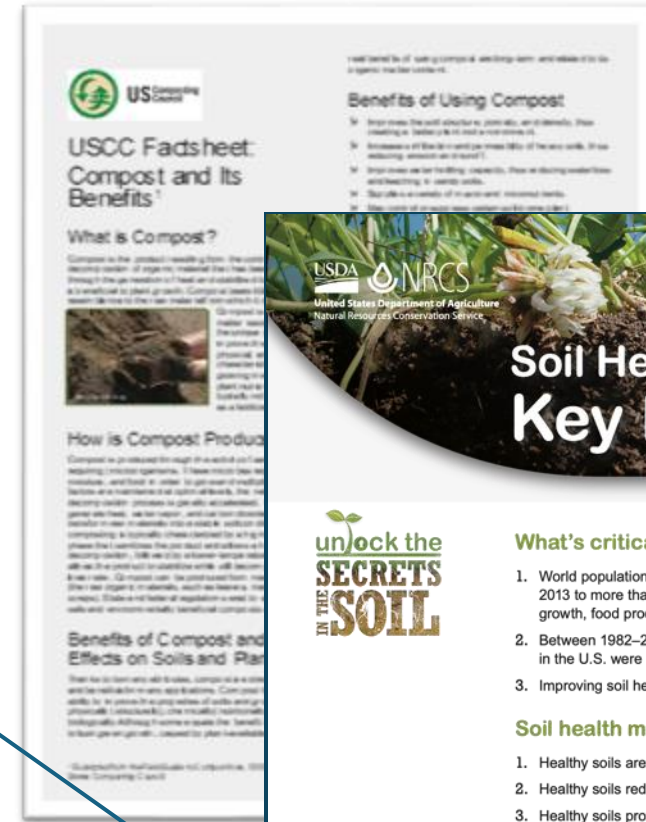


FORT COLLINS RESIDENTIAL
TOP DRESS — ½" per 1000 sqft

Immediate water reduction while compost moves into soil from aeration and brooming. Fertilizer requires move water for application.



“1% OF ORGANIC MATTER IN THE TOP SIX INCHES OF SOIL WOULD HOLD APPROXIMATELY 27,000 GALLONS OF WATER PER ACRE.”



Soil Health Key Points

un|lock the SECRETS IN THE SOIL

What's critical about soil health now?

1. World population is projected to increase from 7 billion in 2013 to more than 9 billion in 2050. To sustain this level of growth, food production will need to rise by 70 percent.
2. Between 1982–2007, 14 million acres of prime farmland in the U.S. were lost to development.
3. Improving soil health is key to long-term, sustainable agricultural production.

Soil health matters because:

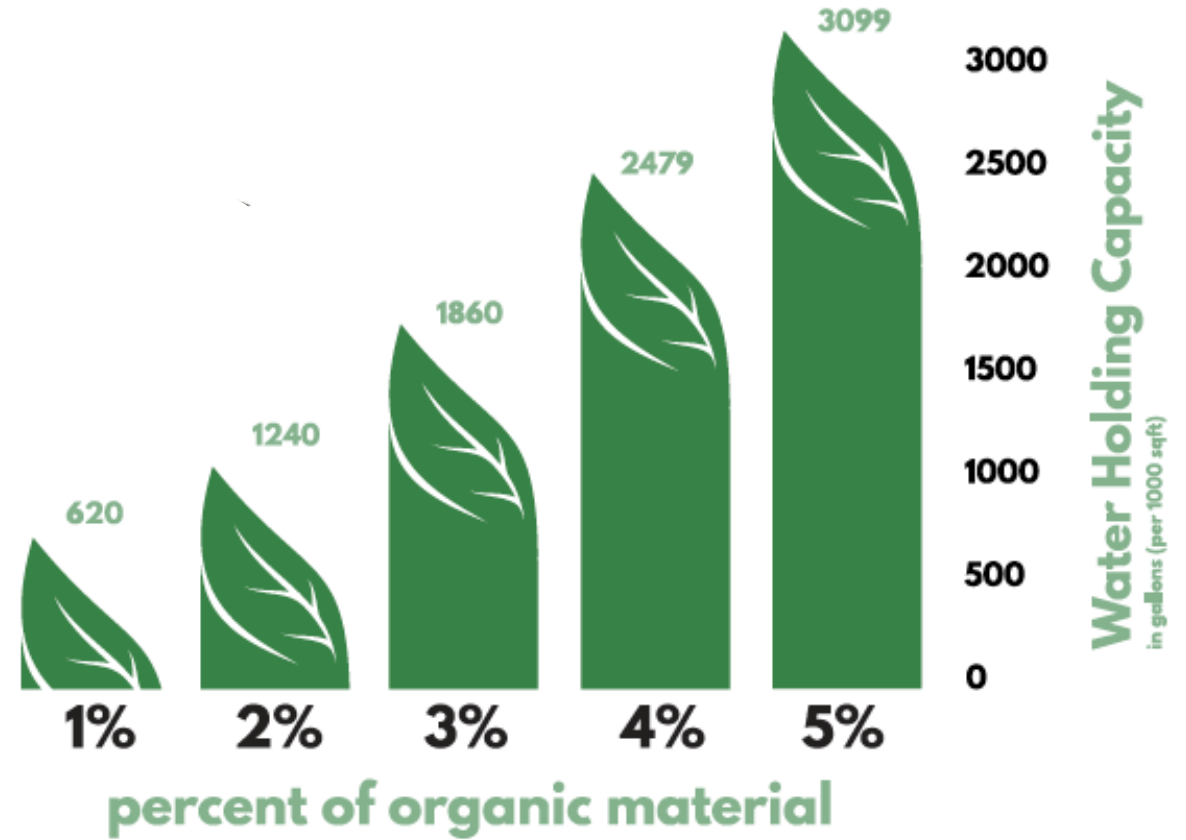
1. Healthy soils are high-performing, productive soils.
2. Healthy soils reduce production costs—and improve profits.
3. Healthy soils protect natural resources on **and** off the farm.
4. Franklin Roosevelt's statement, "The nation that destroys its soil destroys itself," is as true today as it was 75 years ago.
5. Healthy soils can reduce nutrient loading and sediment runoff, increase efficiencies, and sustain wildlife habitat.

What are the benefits of healthy soil?

1. Healthy soil holds more water (by binding it to organic matter), and loses less water to runoff and evaporation.
2. Organic matter builds as tillage declines and plants and residue cover the soil. Organic matter holds 18-20 times its weight in water and recycles nutrients for plants to use.
3. One percent of organic matter in the top six inches of soil would hold approximately 27,000 gallons of water per acre!
4. Most farmers can increase their soil organic matter in **three to 10 years** if they are motivated about adopting conservation practices to achieve this goal.

www.nrcs.usda.gov

Helping People Help the Land
USDA is an equal opportunity provider and employer.



Bottom line: how much water you need is directly related to the amount of organic matter present in the soil.

Johnson Farm

3000 CY over 200 acres

Increased yield, worms, water pivots reduction



REGENERATIVE POTENTIAL OF COMPOST: SOIL LONGEVITY

- 
- A photograph showing a row of young green seedlings growing in dark, rich soil. The soil is cut away to reveal a dense network of roots extending deep into the ground. The background is a soft, out-of-focus green.
- By replenishing soil organic matter and organic nutrients, compost helps prevent soil degradation, maintaining long-term productivity.
 - Reduces or removes the cost for Artificial Fertilizers.
 - **Improve plant's natural ability to defend against disease**
 - Reduce water frequencies and volume from increased holding capacity.

DISEASE SUPPRESSION

- Restores soil health encouraging thicker grass, providing a super healthy turf.
- **NECROTIC RING SPOT** – COMPOST is an effective treatment to remove this common Colorado lawn disease.
- Tested and Supported by Colorado State University department of Horticulture and Landscape Architecture.

- One year after treatment
- Application ¼" in Fall & Spring
- Aeration applied to test area



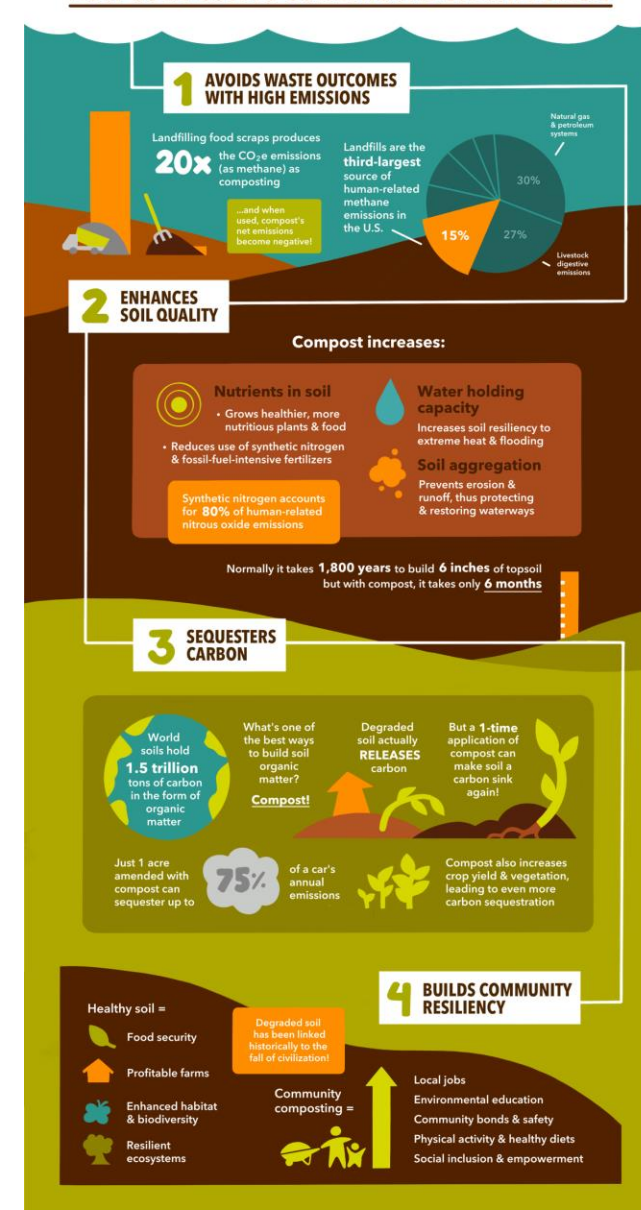




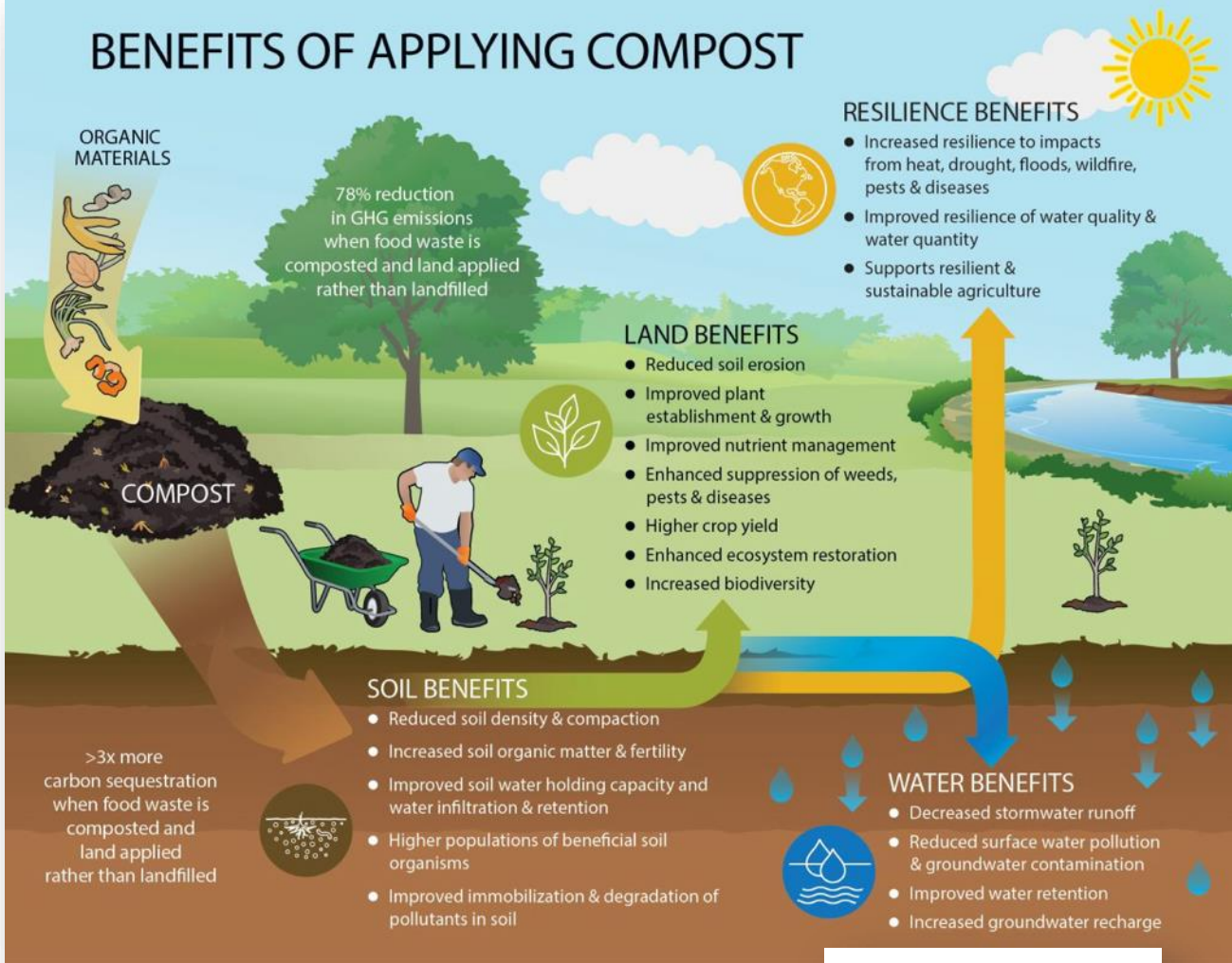
Carbon Sequestration through Compost Application Pilot Project

In Sonoma, California, sixteen farms and ranches participated in the program during 2023, collectively sequestering an impressive 6,070 metric tons of CO₂ equivalent over 15 years. To put this into perspective, sequestering this amount of carbon is equivalent to taking approximately 1,500 passenger commuter vehicles off the road for one year. Another compelling comparison is the amount of carbon sequestered by 7,087 acres of U.S. forests in a single year.

HOW COMPOSTING COMBATS THE CLIMATE CRISIS



BENEFITS OF APPLYING COMPOST



www.epa.gov/sustainable-management-food/composting



The graphic features the text "RESTORE YOUR SOIL" in large, bold letters, with a green leaf icon above the word "SOIL". Below the text is the website "A10ORGANICS.COM". To the right is a QR code with the text "SCAN FOR COMPOST WISDOM!" above it. The background is white with faint, repeating patterns of soil and plants.

The graphic shows a winding road leading through a landscape with trees, a yellow tractor, and a "FOOD SCRAP DROP-OFF" sign. At the top, the "Target Organics" logo is displayed, along with a navigation menu: "COMPOST 101", "PLANNING", "SITE DEVELOPMENT", "OUTREACH", "COMPOST TO MARKET", and "LINK LIBRARY". At the bottom, the "Target Organics" logo is repeated with the text "A COMPOST PROGRAM RESOURCE HUB".

www.compostingcouncil.org



THE NATIONWIDE STANDARD



Scan the code
to learn more.



QUALITY IS IN THE EYE OF THE CONSUMER

Compost use and selection decisions involve many factors, and are not one size fits all. The Seal of Testing Assurance (STA) Program helps you make the best decision for your application.



Clarity.

Similar to a nutrition label, the STA Program's Compost Technical Data Sheet (CTDS) includes test results, a list of ingredients, and recommended directions for use.



Consistency.

The STA Program provides checks and balances within the STA Lab and Participant network to ensure proficiency and consistency with testing procedures and compliance, providing apples to apples comparisons of compost properties.



Confidence.

Similar to trusting a vehicle report when purchasing a vehicle, the STA's CTDS report provides consumers with confidence and knowledge of what is in the compost and how it was produced.

Exclusive discount
now through April

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STA Certified[®]
COMPOST
A program of the US Composting Council



WORDS MATTER

ORGANICS RECYCLING

The process of diverting food scraps, yard waste, and other compostable materials from landfills and turning them into valuable soil amendments like compost through natural decomposition.

ORGANICS COLLECTION

A curbside or drop-off service that gathers organic waste (natural resources) including food scraps, yard trimmings, and compostable materials for transport to a composting or processing facility.

COMPOSTING

The controlled biological decomposition of organic materials (like food waste, leaves, and manure) into a nutrient-rich soil amendment called compost. This process requires the right balance of air, moisture, and temperature.

COMPOST

A dark, crumbly, earthy-smelling material produced from composting. Compost enhances soil health, improves water retention, supports plant growth, and helps sequester carbon.



THANK YOU

#RESTOREYOURSOIL

#ORGANICSMATTERMATTERS

QUESTIONS?



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Thank you

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Rutger@ecocycle.com