RECYCLE COLORADO

ROI of COMPOST USE

Noah Kaplan – Compost Colorado - Moderator
Clinton Sander – A1 Organics
Jonathan Whetstine – Timberline Rock-n-Roll
Jamie Blanchand-Poling – Compost Queen
Sampson Brozek - WM

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.

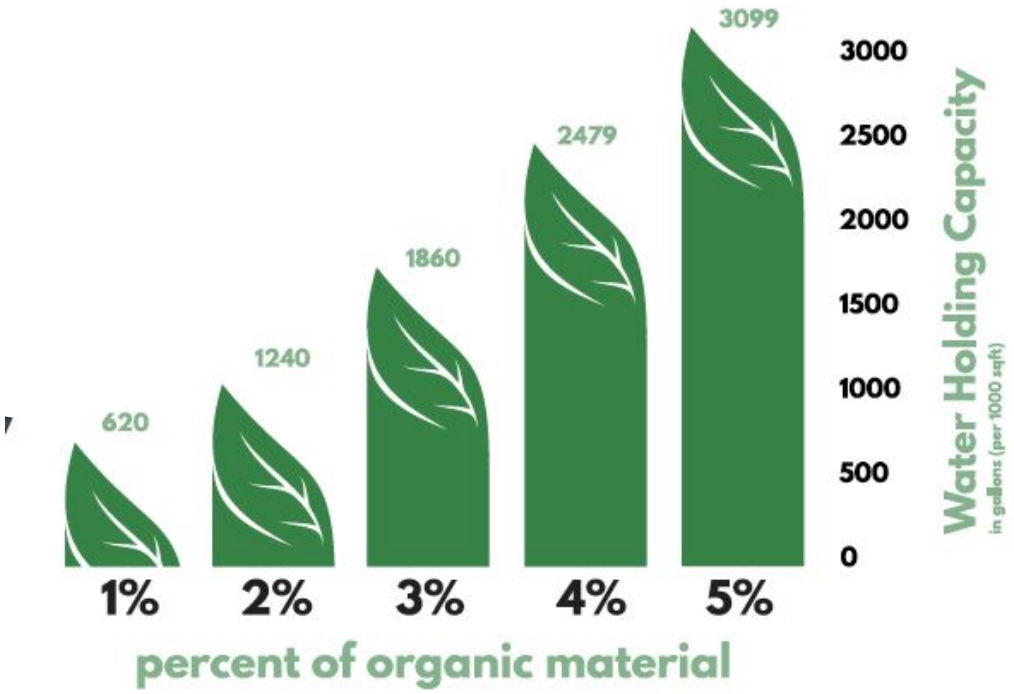
9. Cost Savings

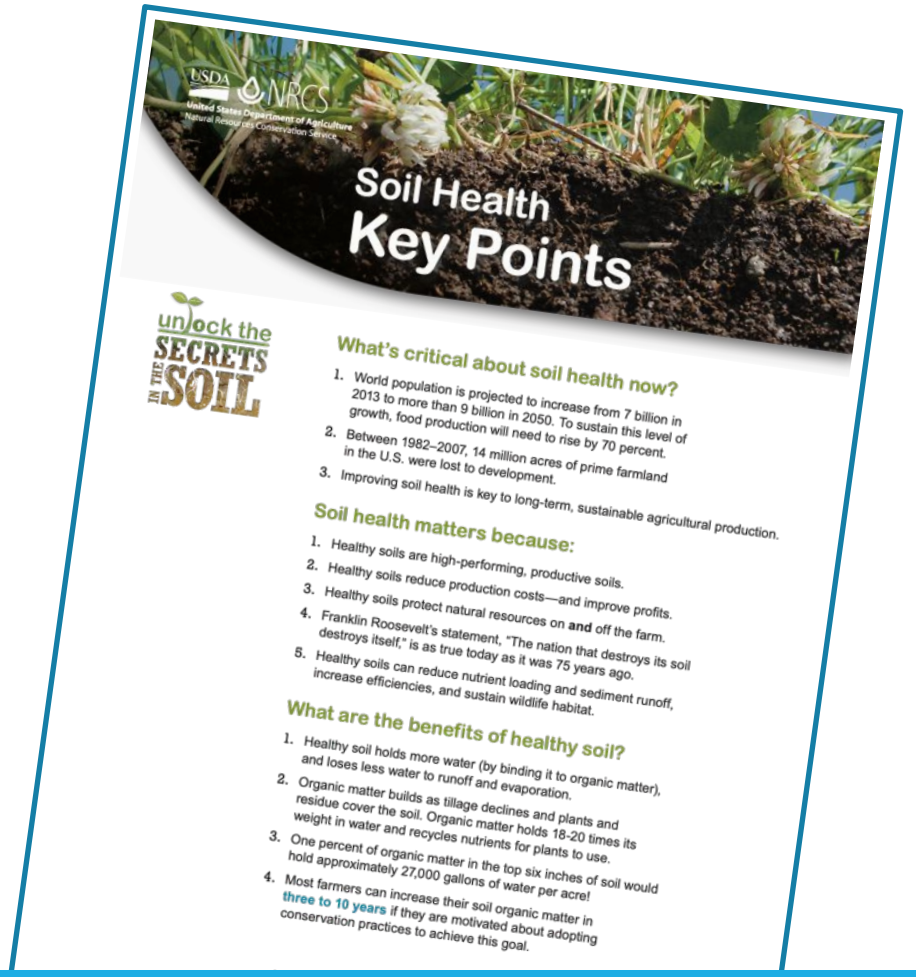
• By reducing the need for chemical fertilizers, pesticides, and irrigation, farmers can achieve long-term economic benefits.

10. Closing the Compost Loop

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

BOTTOM LINE: HOW MUCH WATER YOU NEED IS DIRECTLY RELATED TO THE AMOUNT OF ORGANIC MATTER PRESENT IN THE SOIL.





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

Reduce water frequencies and volume WITH increased holding capacity.

WATER SAVINGS

=

MONEY SAVINGS

HEALTHY SOILS

=

HEALTHY PLANTS

A1 organics®

A1 organics®

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


Compost Queen


Without compost


With compost


Check out the results from one of our compost customers
Before


Compost Applied


5 Weeks Sod Grass

Water Conservation through Soil Health

Why: If we improve soil health by focusing on beneficial soil microbes & soil organic matter, is it possible to reduce irrigation needs without degrading plant health and vigor?

20 % Reduction Achieved
243,000 Gallons Saved To Date (4 irrigation valves)

Plant Group	Total Water Savings (Gallons)	% of Total	Area (sq. ft.)	Area (acre)	Water Savings (Gallons / Acre)	Water Savings (Gallons / Acre / Year)
Pine	7,671	3.2%	1215	0.028	275,000	150,000
Palm	6,921	2.8%	835	0.019	361,000	197,000
Camphor	14,168	5.8%	2862	0.066	216,000	118,000
Turf	214,289	88.2%	2076	0.048	4,496,000	2,453,000
Total	243,049		6988	0.160	1,515,000	826,000

COMPOST ACADEMY

ROI of Erosion Control

Definition: wind/water loosens soils particles and transported in the form of sediment

EPA identifies sediment as leading source of surface water contamination

Two major application strategies:

“Compost Blanket” – grade structure

“Compost Sock” – BMP & filtration

Strengthens soil structure & initiates cohesion

WM EARTHCARE Erosion Control Compost

WM Earthcare™ Erosion Control Compost, made from local yard trimmings and residential food scraps, combines the benefits of WM Earthcare Premium Compost with coarse particles to help form a protective blanket against erosion. Produced at select WM California facilities under rigorous quality controls, this stable and mature compost is designed to meet California safety standards and is ideal for erosion control, horticulture, agriculture, and environmental applications. WM Earthcare Erosion Control Compost carries the industry’s seal of excellence per US Composting Council’s Seal of Testing Assurance.

STA Certified™ COMPOST

Quality Characteristics	Test method*	Requirement	
		Medium	
pH	TMECC 04.11-A	6.0–8.5	
Soluble salts (dS/m)	TMECC 04.10-A	0–10	
Moisture content (% wet weight)	TMECC 03.09-A	25–60	
Organic matter content (% dry weight)	TMECC 05.07-A	30–100	
Maturity (seed emergence) (% relative to positive control)	TMECC 05.05-A	80 or above	
Maturity (seedling vigor) (% relative to positive control)	TMECC 05.05-A	80 or above	
Stability (mg CO_2-C/g OM per day)	TMECC 05.08-B	8 or below	
Pathogen Salmonella (most probable number per 4 grams dry weight basis)	TMECC 07.01-B	< 3	
Pathogen Fecal coliform (most probable number per gram dry weight basis)	TMECC 07.01-B	< 1,000	
Physical contaminants (% dry weight) Plastic, glass, and metal	TMECC 02.02-C	Combined total: < 0.5	
Film plastic (% dry weight)	TMECC 02.02-C	Combined total: < 0.1	
Gradation medium (dry weight % passing):	TMECC 02.02-B	Min	Max
2-inch sieve		95	–
3/8-inch sieve		30	75

For more information contact Jeff Ziegenbein at (951) 240-8214 or via email at jziegenb@wm.com

SUPPORT OPPORTUNITES

- Agricultural use for compost, understand the programs and the farms.
- NRCS 336 Program
- Soil health groups, i.e. Quivira Coalition, Colorado Department of Ag., SARE, CREF
- Water Districts - Mile High Flood District
- Compost berms and blankets
- CDOT
- Compost wattles and soil amendment
- Local utilities and new lawn establishment permits
- Denver, Fort Collins, and Colorado Springs Water Utilities on new installation (4cyd/1000 sqft).
- Erosion Control – Know your Specs, Educate your Community, Traditional Methods $6400 vs Compost application $3200.

THANK YOU

Clinton Sander, A1 Organics – clintonsander@a1organics.com

Sampson Brozek, Waste Management – sbrozek@wm.com

Jonathan Whetstine, Timberline Rock-n-Roll – jwhetstine@timberlinerocknroll.com

Jamie Blanchard-Poling, Compost Queen – jamie@compostqueenfc.com

RECYCLE COLORADO