



Michigan Recycling Coalition Presentation
Adam Brent, CEO
Tom Zimnicki, Michigan Environmental Council

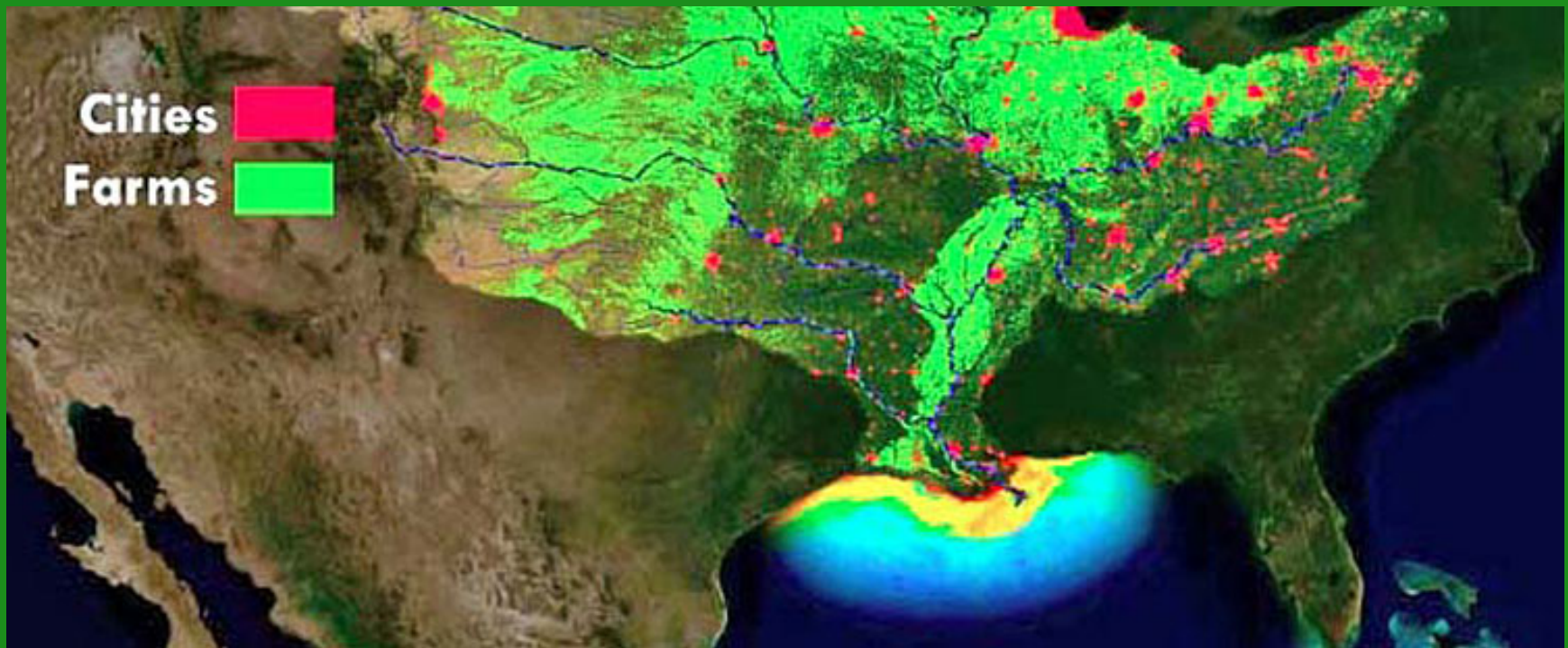
The Organic Waste Problem

- ✧ 40% of all food produced is thrown away
- ✧ Michigan landfills over 2 million tons of food/yr
- ✧ Michigan composts less than 20,000 tons of food waste/yr
- ✧ Food waste GHG emissions = 33 million cars
- ✧ Organic waste is an expensive and logistical problem for local businesses and waste haulers



Cherry Pomace

The Agriculture Problem



- ✧ Excess chemical fertilizer ends up in watersheds and wreaks havoc on ecosystems
- ✧ Nitrogen fertilizers convert to N_2O gas, a GHG w/310x CO_2

Compost Solution

- ✧ Reduces landfill waste
- ✧ Reduces GHG emissions
- ✧ Regenerates degraded soils
- ✧ Sequesters carbon in soil
- ✧ Increases food production
- ✧ Provides valuable jobs



Agriculture Compost Sales

Michigan Agriculture

- ✧ 51,000 farms/6 million acres
- ✧ \$19B/yr industry leads nation in 19 commodities

Compost

- ✧ Conventional farmers
- ✧ Optimizes soil fertility
- ✧ Lowers chemical fertilizer & water inputs
- ✧ Reduces soil diseases
- ✧ Measurable results



Increased corn yield by 5% :: Reduced fertilizer inputs by 11%

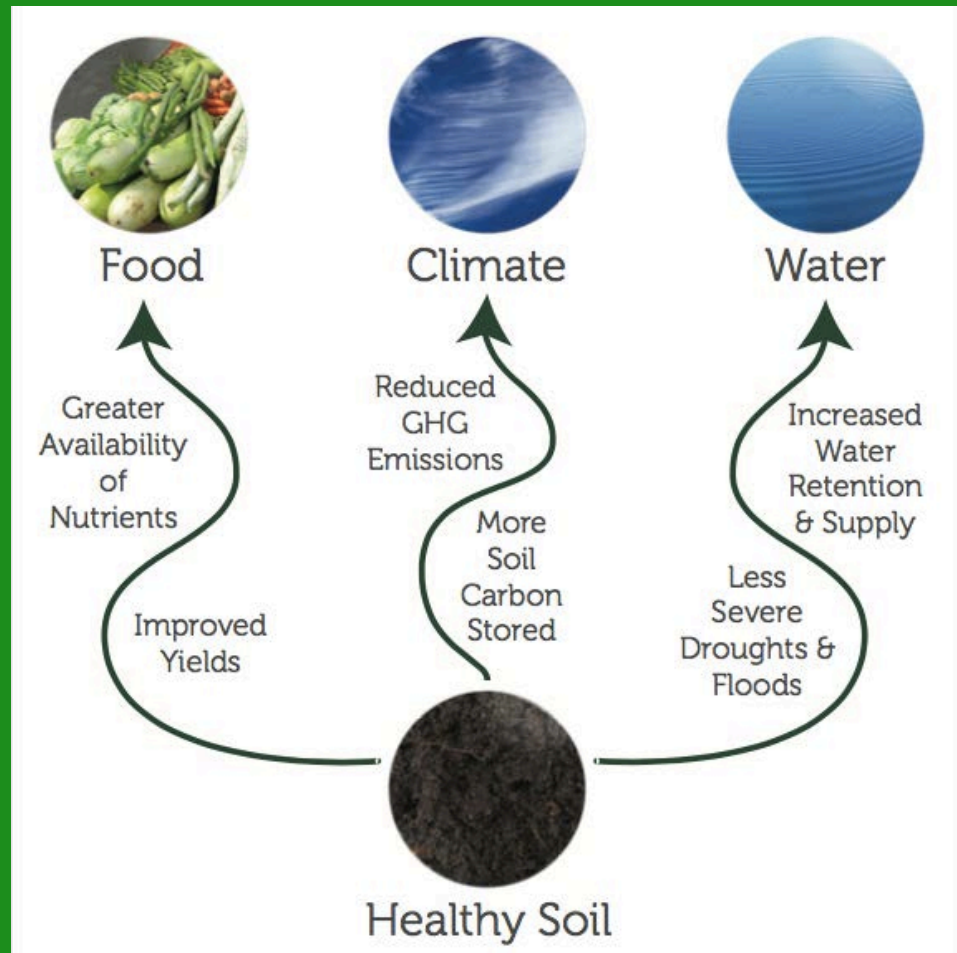
Spreading Compost



1 Ton/Acre Application



Healthy Soil Benefits



From Field to Fork & Back Again

- ✧ Major food companies adopting Zero Waste policies/sustainable food production
- ✧ Yard waste is banned from Illinois, Indiana & Michigan landfills



Community Benefits



Place-based jobs



Retail Sales Tax



Property Tax Revenue



Zero Waste



Environmental Protection



Sustainable Crop Production

Thank You

Adam Brent, CEO

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Compost Analysis

Report Number
F16201-6009
Account Number
17014



3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4755
aigreatlakes.com

To: COCOA CORPORATION
3911 N PAULINA STREET
CHICAGO, IL 60613

For: COCOA

Attn: ADAM BRENT

Sample ID: COCOA
Lab Number: 86338

Date Received: 7/19/2016
Date Reported: 8/4/2016 Page: 2 of 2

COMPOST ANALYSIS

Analysis	Unit	Analysis Result	Dry Basis Result	Analysis Method
Foreign Material	%		0.00	TMECC 03.08-A
Germination - Emergence	%	100		TMECC 05.05-A
Germination - Vigor	%	100		TMECC 05.05-A
Ave Ht of Seedlings in Control	centimeters	7.9		TMECC 05.05-A
Ave Ht of Seedlings in Compost	centimeters	11.9		TMECC 05.05-A
Respiration - CO ₂ -C/g TS	mg CO ₂ -C / g TS/Day		1	TMECC 05.08-B
Respiration - CO ₂ -C/g OM	mg CO ₂ -C / g OM/Day		1	TMECC 05.08-B
Compost Stability Index	-		Very Stable	TMECC 05.08
Retained on U.S. 2-inch Sieve	%		0.00	TMECC 02.02-B
Retained on U.S. 1-inch Sieve	%		0.00	TMECC 02.02-B
Retained on U.S. 5/8-inch Sieve	%		1.52	TMECC 02.02-B
Retained on U.S. 3/8-inch Sieve	%		16.35	TMECC 02.02-B
Retained on U.S. 1/4-inch Sieve	%		15.17	TMECC 02.02-B
Retained on U.S. 5/32-inch	%		11.93	TMECC 02.02-B

} 50% Increase

Compost Analysis

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a&lgreatlakes
LABORATORIES
Scientists who don't mind getting dirty.™

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COMPOST ANALYSIS

Analysis	Unit	Analysis Result	Dry Basis Result	Analysis Method
Moisture @ 70 C	%	38.40		TMECC 03.09-A
Solids	%	61.60		TMECC 03.09-A
Total Nitrogen (N)	%	0.65	1.06	TMECC 04.02-D
Phosphorus (P)	%	0.13	0.21	TMECC 04.03-A
Phosphate (P ₂ O ₅)	%	0.30	0.48	TMECC 04.03-A
Potassium (K)	%	0.19	0.31	TMECC 04.04-A
Potash (K ₂ O)	%	0.23	0.37	TMECC 04.04-A
Magnesium (Mg)	%	0.70	1.13	TMECC 04.05-MG
Calcium (Ca)	%	4.08	6.63	TMECC 04.05-CA
pH	-	7.8		TMECC 04.11-A
Soluble Salts	dS/m	1.43		TMECC 04.10-A
Ash @ 550 C	%	38.98	63.28	TMECC 03.02-B
Organic Matter (LOI @ 550 C)	%	22.62	36.72	TMECC 05.07-A
Total Organic Carbon (C)	%	11.31	18.36	TMECC 04.01-A
Carbon:Nitrogen Ratio (C:N)	-	17.3:1	17.3:1	TMECC 05.02-A

Compost Facilities

- ✧ Higher average wages
 - ✧ Equipment Operators
 - ✧ Maintenance Workers
 - ✧ Office Staff
 - ✧ Corporate Account Managers
 - ✧ Logistics Personnel
 - ✧ Retail Staff
 - ✧ Research and Development
 - ✧ Agricultural Services Staff
- ✧ Compost facilities will employ more people, pay higher wages and offer more career opportunities than a distribution center
 - ✧ Composting is a place-based industry that cannot be outsourced abroad
 - ✧ Composting supports new green infrastructure – landscapers, green roofs, compost blankets, and more for agriculture, construction, residential & recreational use
 - ✧ For every 1 million tons of organic material composted, almost 1,400 new full-time jobs can be supported, paying wages of \$23M to \$57M per year

FAQ's

- ✧ Does composting generate foul odors?
- ✧ Is composting noisy?
- ✧ Will compost harm pets?
- ✧ How do compost facilities handle nuisances?
- ✧ Does composting break down pesticides and antibiotics?
- ✧ How much truck traffic is generated?
- ✧ Who would be our main customers?

Operations Management

Organic materials are those capable of decaying into humus. Some common examples include:

- Yard waste
 - Fruit & vegetable scraps
 - Eggshells, nutshells, paper & recycled paper residuals
 - Wood wastes including sawdust & wood chips
 - Coffee grounds, hair clippings, feathers, bone meal & blood meal
 - Waste generated in the production of livestock and poultry including manure and used bedding materials
- All food waste materials must be pre-approved before being accepted on site
 - All organic waste material must be incorporated within 24 hours of receipt
 - Contaminants must be removed and disposed of properly
 - Windrows must be turned
 - Windrows must be monitored for O₂, temperature & moisture
 - Finished compost must be screened and tested for maturity, nutrients and pathogens

Cocoa Compost

Founded in 2011, Cocoa's Holland Michigan facility recycles 10,000 tons/year of food and yard waste into high quality humus compost.

Cocoa provides cost effective, environmentally sustainable waste-management solutions for Chef Container and Fortune 100 food manufacturers and municipalities

Cocoa provides some of Michigan's largest grain farms with compost for conventional corn and soybean production.

Cocoa's mission is to responsibly produce compost products that generate superior financial, social and environmental solutions for businesses, farmers and the communities we serve.