

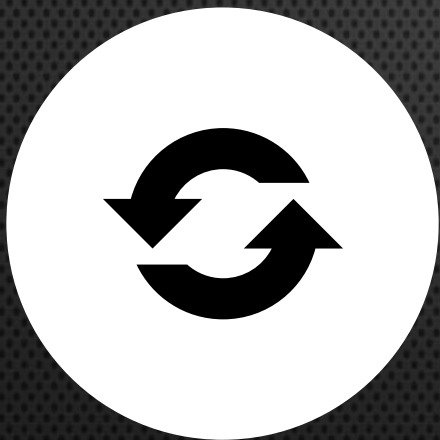


## Growing a Compost Facility

## THE STORY OF **A1** **ORGANICS**

Bob Yost • VP & Chief Technical Officer for A1  
Organics

Washington Organics Recycling Committee  
Annual Conference November 15, 2018



A1 ORGANICS

A "CENTENNIAL" COMPANY



HISTORY

44 YEARS



**SWEDEN TO COLORADO**





LAMBLAND INC.



# Corporate Office

Eaton, Colorado



**A1ORGANICS.COM**



# A1 ORGANICS

Eaton, Colorado







**PARTNERSHIPS SPANNING GENERATIONS**





# LOST ANTLERS



[A1ORGANICS.COM](http://A1ORGANICS.COM)

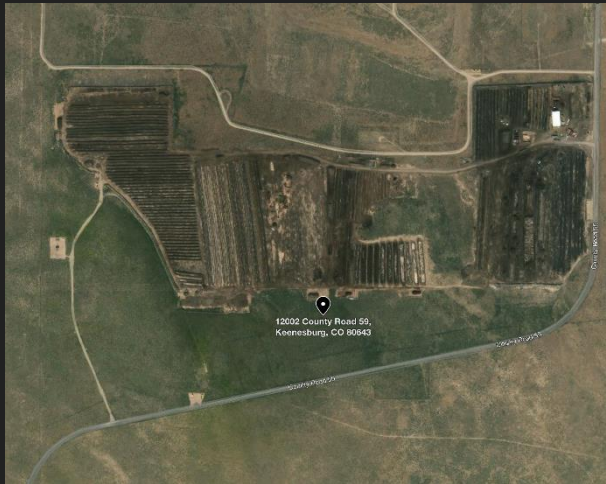


# RATTLER RIDGE

## 400+ acres



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# STAPLETON, CO



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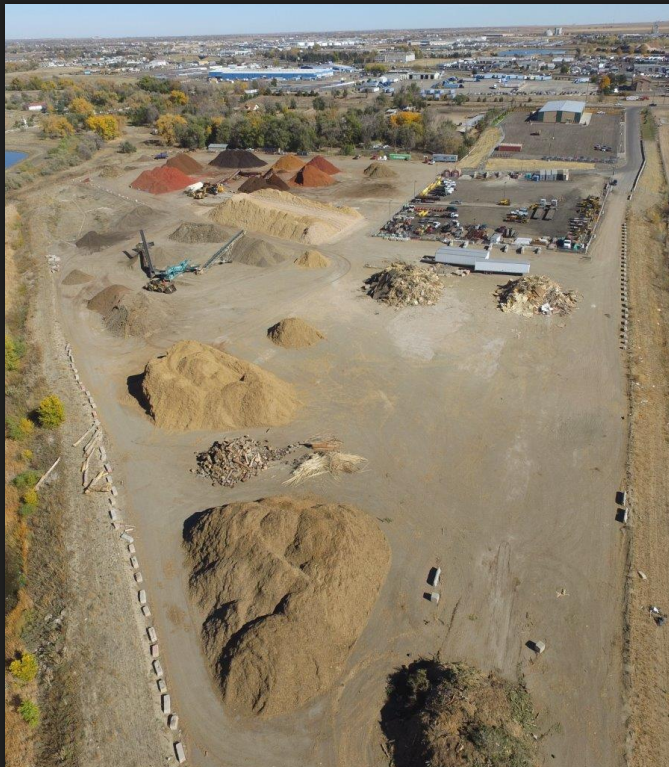




# COMMERCE CITY, CO



**A1ORGANICS.COM**



# EAGLEWOOD, CO



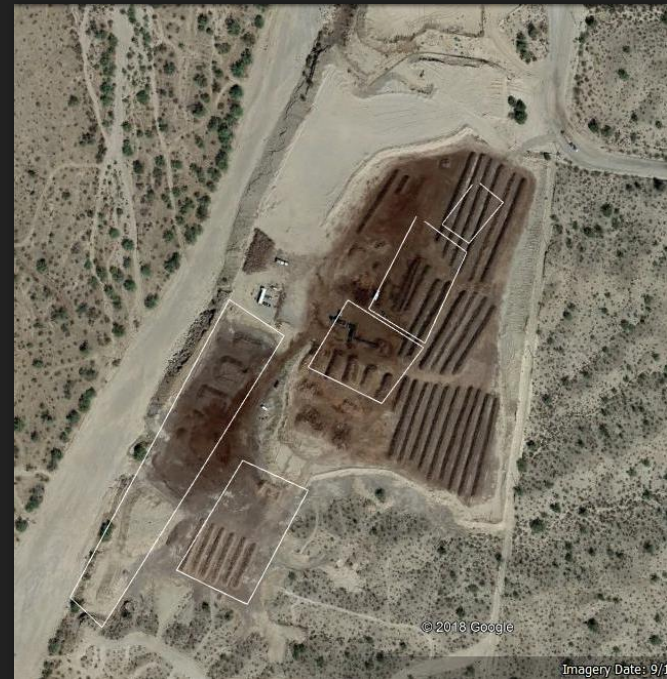
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# MANY LOCATIONS

## Las Vegas, Phoenix, Platteville



# HEARTLAND DIGESTOR

Weld County, Colorado



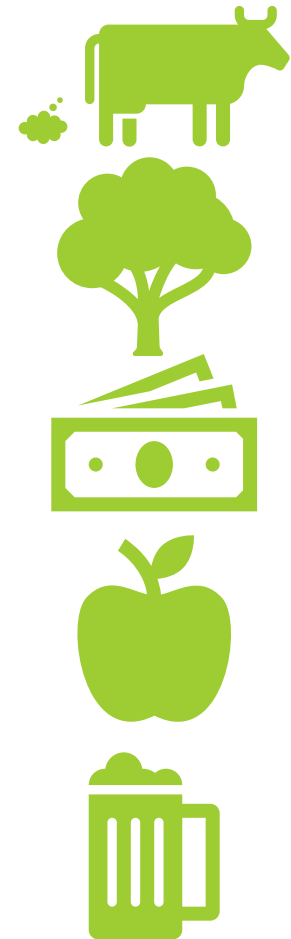


# Current Composting Methods

- Aerated Windrow (AW)
- Modified Static Aerobic Pile (MSAP)
- Pro-Bio

# DIVERSE FEEDSTOCKS

- Green Waste (tree limbs, logs, grass, leaves)
- Biosolids
- Grease Cap
- Paunch Manure
- Screenings
- Grit
- Food Waste (clean, “dirty”, curbside residential, production, process, FOG)
- “Money”
- Manure
- Dairy (milk processing)
- DAF
- De-fill liquids
- Brewery







**Aerated Windrow (AW)**



## COMPOSTING

Aerated Windrow (AW)



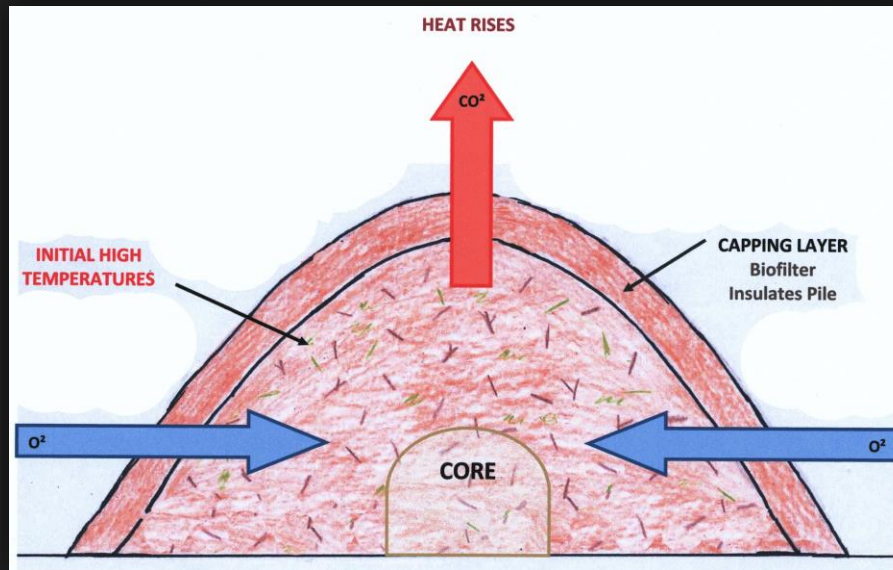
# Modified Static Aerobic Pile (MSAP)

1. Mix feedstocks (provide suitable C:N Ratio & adequate moisture)
2. Construct windrow
3. Apply inoculant (applied to surface of pile in 2 or 3 locations)
4. Cap the windrow (unscreened compost, overs, or ground yard waste)
5. Pile remains undisturbed for approximately 4 weeks
6. First turn (Day 30)
7. Second turn (Day 45)
8. Screen (Day 60)



## ACCELERATED AEROBIC DECOMPOSITION

Movement of the microbes from the outside in draws oxygen towards the core of the pile.



Windrows have the ability to largely remain aerobic without the need for frequent turning.

## ENHANCING THE WINDROWS 'NATURAL CHIMNEY EFFECT'



## WHAT ARE THE INOCULANTS?

- An extremely diverse blend of enzyme-producing bacteria
- A broad array of fungi
- Microbes are propagated and introduced into a precisely blended carrier material made from natural organic feedstocks
- Totally unique and unlike traditional bottled bugs



A LIVING, BREATHING AND  
HIGHLY ROBUST PRODUCT

## PROLIFERATION OF THE MICROBES

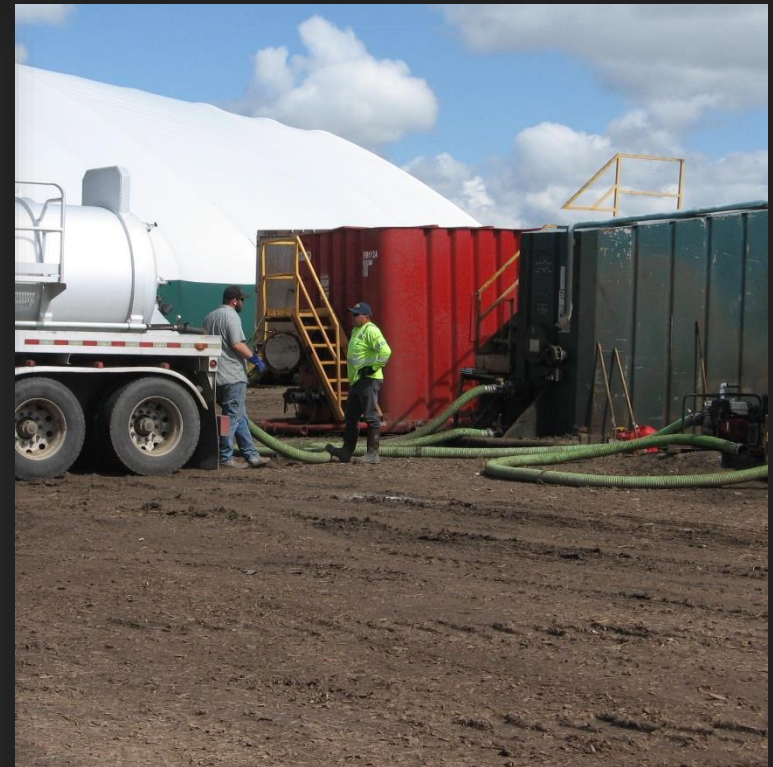


- The microbes multiply and move rapidly
  - ✓ Outwards (horizontally) initially
  - ✓ Then inwards (towards the center of the pile)
- This activity generates high temperatures well in excess of pathogen destruction 131°F (55°C)
- Increased bacterial activity makes for hotter composting temperatures
- By not continually turning the rows, high bacteria densities are maintained, thus increasing efficiency

HIGH TEMPERATURE RAPID DECOMPOSITION



# PRO-BIO













**Pro-Bio  
Cleared  
Beds**

**Dry  
Bottom**





# Aerated Windrows Testing



# Some Thoughts on Markets



- Developing Products - Branding
- Large and Niche Markets
- Product Quality
- Analytical
- Specifications
- Value Proposition
- Close the “Loop”



# WINS



Our People



Sustainable Long Term Relationships



Rattler Ridge & Site Expansion • We Control



Innovations in Operations

MSAP Composting System  
Pro-Bio System for Liquid Management  
Purchase of Mountain States Wood Recycling  
Focus back to Colorado



Marketing Manager – Focus

# HARDEST CHALLENGES



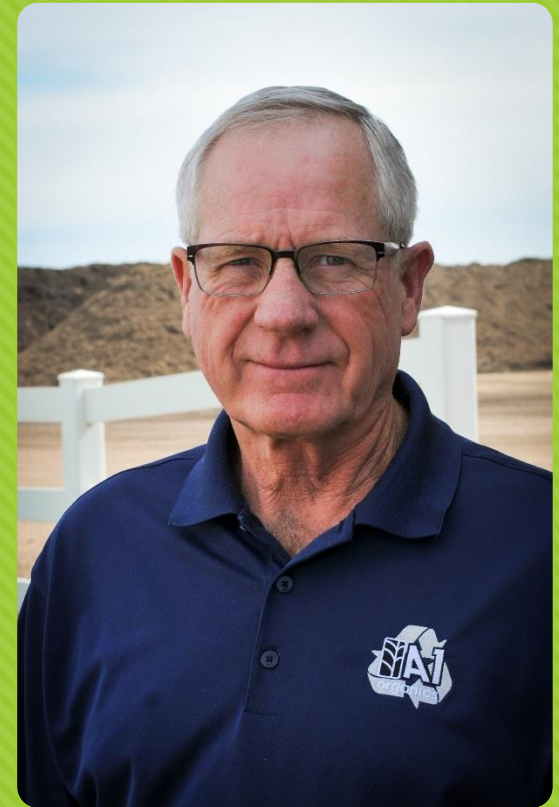
- Loss of Duane and Chuck Wilson
- Regulatory Impacts and Effects - Past and Future
  - Politics vs. Logic and Common Sense – Silo's
  - Urban Expansion - NIMBY
- Loss of sites – outside of our control
  - Heartland Biogas
  - Las Vegas
  - Phoenix
  - Lost Antlers, HWY 66, Stapleton



# WHAT'S NEXT



- New Acquisitions for Growth
- New Product Expansion
- New Technology
  - Production/Operations
  - Products
  - Information
  - Stay ahead, look for better and best, listen



**THANK YOU, ANY QUESTIONS?**