



Ag Opportunities in Feed & Fertilizer

Alan Doering
Sr. Scientist of Coproducts, AURI

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Brent Ratliff

Managing Partner, Ani-Tek, LLC

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Ani-Tek™ Business Overview

Updated: 01/01/18



Background

- Established in 2017, Ani-Tek, LLC is focused on product development and supporting new products in the US Swine market.
- Ani-Tek, LLC Managing Partners
 - Dr. Aaron Gaines – Shelbina, MO
 - Dr. James Usry – Social Circle, GA
 - Brent Ratliff, MS – Le Sueur, MN
- Market
 - Our target customers are Integrated Swine Accounts (top 40), Feed Companies and Consulting Nutritionists.
 - Expanding into broiler and layer markets.

Current Portfolio

- Swine Market
 - Feed intake enhancement product – Lactation and Nursery
 - Food to Feed – commodity bakery and specialty ingredients
 - Specialty Dairy Protein – young animal immune support
- Wild and Captive Deer
 - feed additives to support overall health

Customer Driven Product Development

- Swine Production
 - Feed cost reduction
 - Feed Efficiency
 - Improved performance
 - Livability
 - Biosecurity

Science Leads

- Customers are well educated
- Nutrient based nutrition
- Research is not optional, It is demanded

How AURI is an ideal partner

- NutriVance Experience
- Small Company Opportunity



James Crook

General Manager, Union Creek Organics

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James Curren

CEO and Founder, Javacycle

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Craig Holden

Pres. & Chairman, Sustane Natural Fertilizer, Inc.

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Minnesota's Organic Fertilizer From Kenyon to Hong Kong

The Jockey Club at Kau Sai Chau,
Hong Kong, New Territories

2019 New Uses Forum
Agricultural Utilization Research Institute
Minneapolis Marriott West, March 27, 2019

Craig Holden
Sustane Natural Fertilizer, Inc.

www.sustane.com

1. Key issues in the fertilizer industry today. (The 'What')

United Nations Sixth Annual Global Environmental Outlook 2019-03-13 - Calls for unprecedented action:

- A. Reduce land degradation
- B. Limit pollution
- C. Improve water management and quality
- D. Mitigate climate change



Reduce land degradation • Limit pollution •
Improve water management & quality • Mitigate Climate Change

StarTribune

71° 48°
Find a way to have your
lunch outside today.

“Pollution tied to farms will take decades to fix.”

So. Minn. water crisis rises

Pollution tied to farms will take decades to fix, state study finds.

By TONY KENNEDY

The finding emerged from a study by hammer, who heads the MPCA's

9 of 41 major MN watersheds have less than 20%
of lakes that are swimmable or fishable

20 of 41 major MN watersheds have less than 20%
of rivers that are swimmable or fishable

41 major Minnesota
watersheds inventoried to this
date have uncovered ...

9 watersheds where less
than one-fifth of the lakes fully
support swimming, fishing

20 watersheds where less
than one-fifth of the rivers fully
support swimming, fishing.

MURKY WATER: M
of the Minnesota (left)
Mississippi rivers show
comparative water qu

Minnesota is No. 1 in U.S. & World Turkey Production at 46 mill. per year.

Eastgate Farms – Rice and Dakota Counties, Northfield, Minnesota

Produce 460,000 turkeys per year, or 1% of Minnesota's 46 million total

Eastgate Farms' turkeys generate 4,600 tons of manure per year

Minnesota turkey flocks generate (est.) 460,000+ tons of manure per year



**Year round poultry production = year round manure generation
= Treatment, storage and land application challenges**

Suståne Natural Fertilizer manages about 40,000 tons of turkey manure per year by composting and marketing.

2. Addressing the Issues, ('So What?') – Origin of the business:

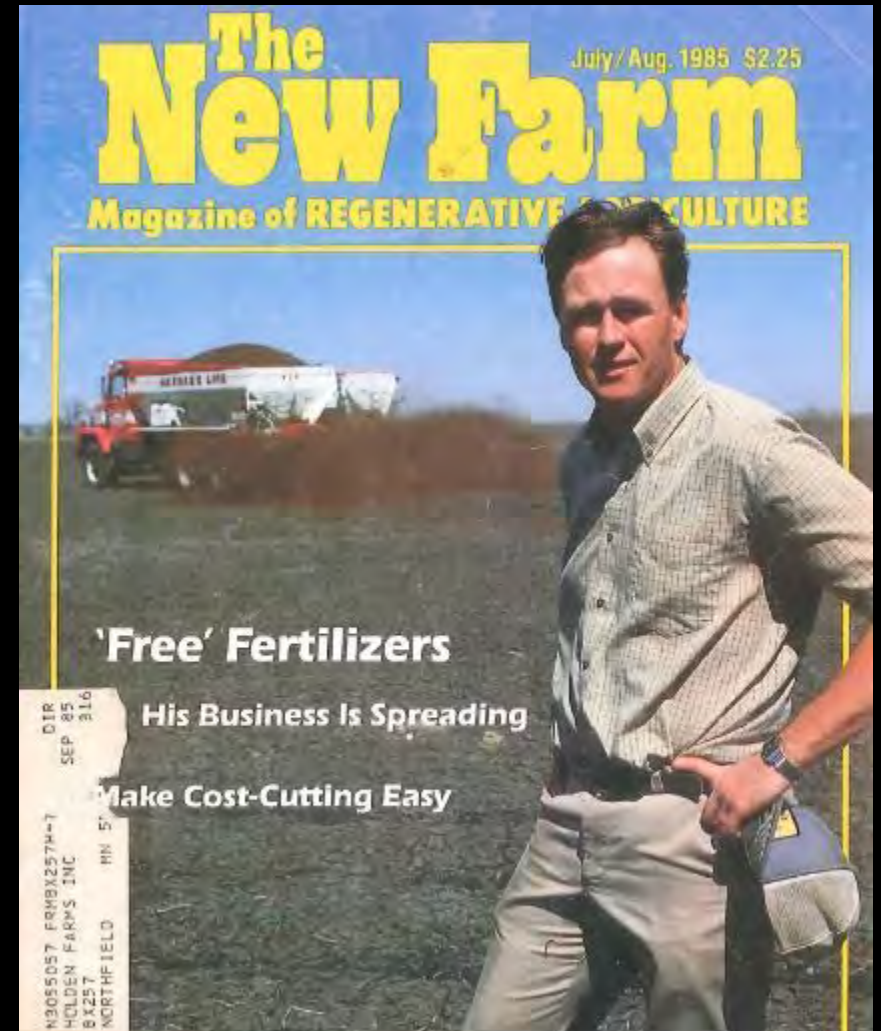
In 1980 at Holden Farms - started composting turkey litter and marketing compost to southeastern Minnesota farmers

We were the first to prove efficacy and method of lower application rates at 1 to 2 ton per acre = profitable yields, reduced pollution potential.



**But...there were huge logistical challenges:
Trucking and land application of 25,000 tpy
All within 3 weeks in spring, maybe 2 in fall.**

Tractor-trailers haul compost to the application site, where it is applied by high-capacity spreader trucks.



Benefits of aerobic composting as a management system:

1. Safe storage during inclement weather – avoid winter application
2. Reduce mass and volume by 40% = less transport cost
3. Convert soluble Nitrogen to Slow Release = less water pollution
4. Destroy pathogens = safety to livestock, people & food crops
5. Creates **homogenous, product** with predictable efficacy



Making Suståne:

Biologically stable organic fertilizer

Aerobic, Thermophilic Composting Process

Suståne Compost Site
Near Kenyon, Minnesota

- MPCA Permitted Composting Facility
- Year around abundant, consistent feedstock
- 26 weeks active composting to stabilization
- Concentrated Compost – 4 tons raw manure = 1 ton of Suståne

**1987 Constructed Sustane Plant
Dehydration, Granulation, Blending,
Packaging and Shipping.**

Cannon Falls, Minnesota



Allows year-round fertilizer manufacturing and sales.

Sustane is a science-based company

Research at Sustane Over 900 trials performed over the past 30 years

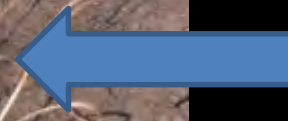


Organic fertilizers can perform as well as or better than synthetic fertilizers!

Sustane 4-6-4
applied at 50 lb.
per acre
Direct with seed.



MAP 11-51-0
applied at 50 lb.
per acre
Direct with seed.



Fertilizer trials on wheat – Manitoba 1991

Organic + Synthetic Superior to Synthetic Only

Blue Salvia 47 Days after Treatment



Nursery Container Fertilizer Trials

Blue Salvia "May Night" *Salvia nemerosa*

Path2 Horticultural Research

Rydal, Georgia, 7-22-2009

47 Days After Treatment

Sustane+ Sumicoat 12-12-12
0.85 Lb. N/cu. yd.

\$35 / bag wholesale

Osmocote 14-14-14
0.85 Lb. N/cu. yd.

\$65 to \$105 / bag wholesale

Nutricote T70 13-13-13
0.85 Lb. N/cu. yd.

Mosaic's Florida Phosphate Mine Tailings Slope Stabilization 2016

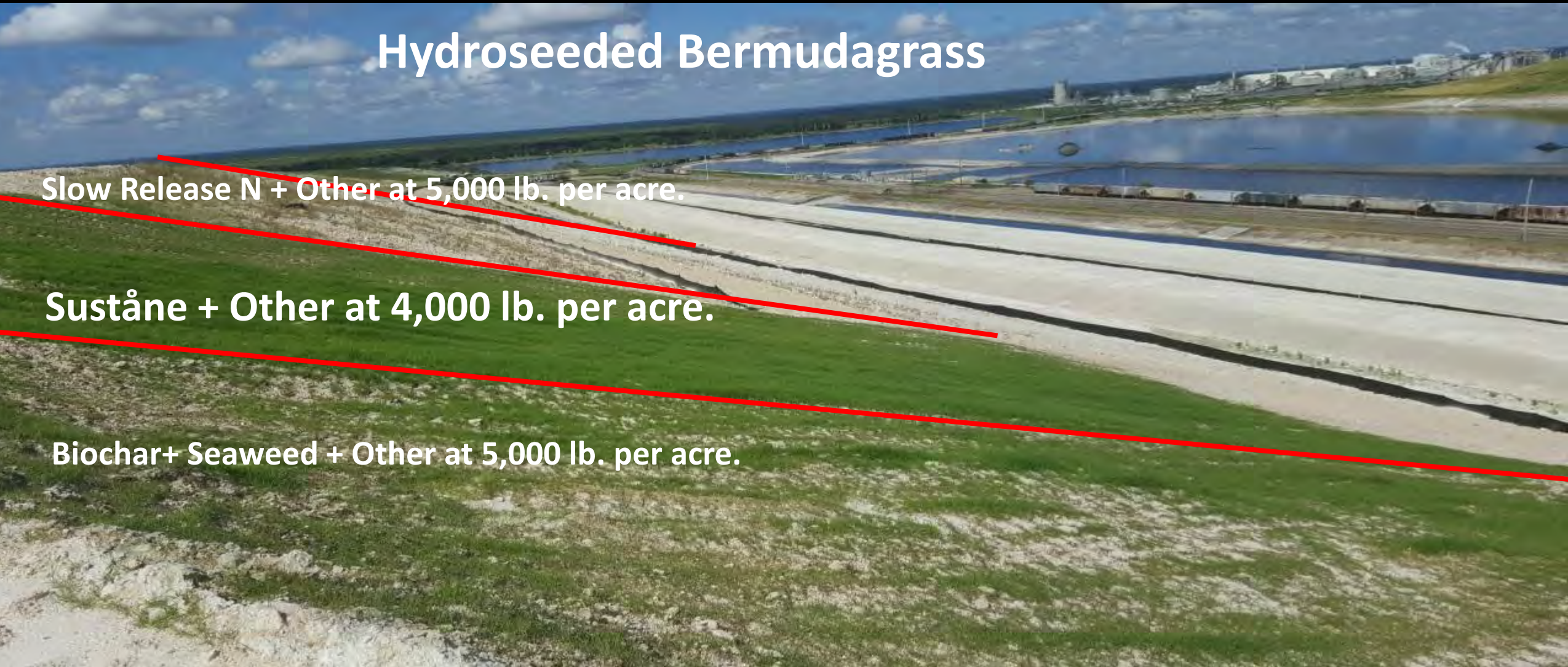
Hydroseeded Bermudagrass

Slow Release N + ~~Other~~ at 5,000 lb. per acre.

Sustane + Other at 4,000 lb. per acre.

Biochar+ Seaweed + Other at 5,000 lb. per acre.

Two weeks after seeding



Customer Service is Paramount

- Technical support for all customers
- Global support to diverse market channels
- Site visits to provide customer solutions



Sustane's Diverse Markets Reduce Risk

Landscape Maintenance - Disney Shanghai China



Organic Wheat - Tappan, North Dakota

Suståne revenues are balanced by diverse market segments

Sustane Products Used in 6 Market Segments in 60 Countries

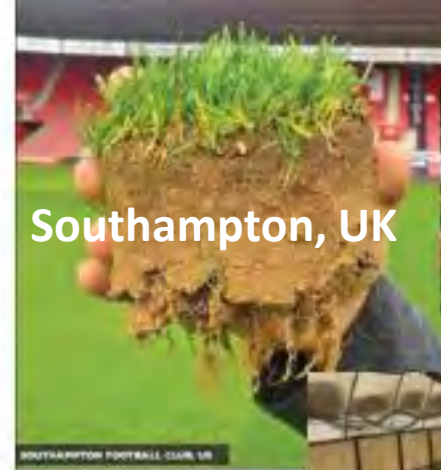
Galveston



Inver Grove Heights



Southampton, UK



Singapore



Abu Dhabi



Western Montana



Mauritius



Detroit



Hong Kong



Taichung, Taiwan



Iowa





3. 'Now What?' Steps Sustane is taking to enter new market opportunities:
As of 2019 there are 46 Sustane products for Professional markets





New market opportunities:
14 products for Consumer markets



Steps Sustane is taking to enter new market opportunities: 28 products for Private Label markets

sungro
HORTICULTURE
Our Expertise is Growing

PREMIER
PRO-MIX

Berger
The Family that Stands by You

myOldcastle.com

ASB
GREENWORLD

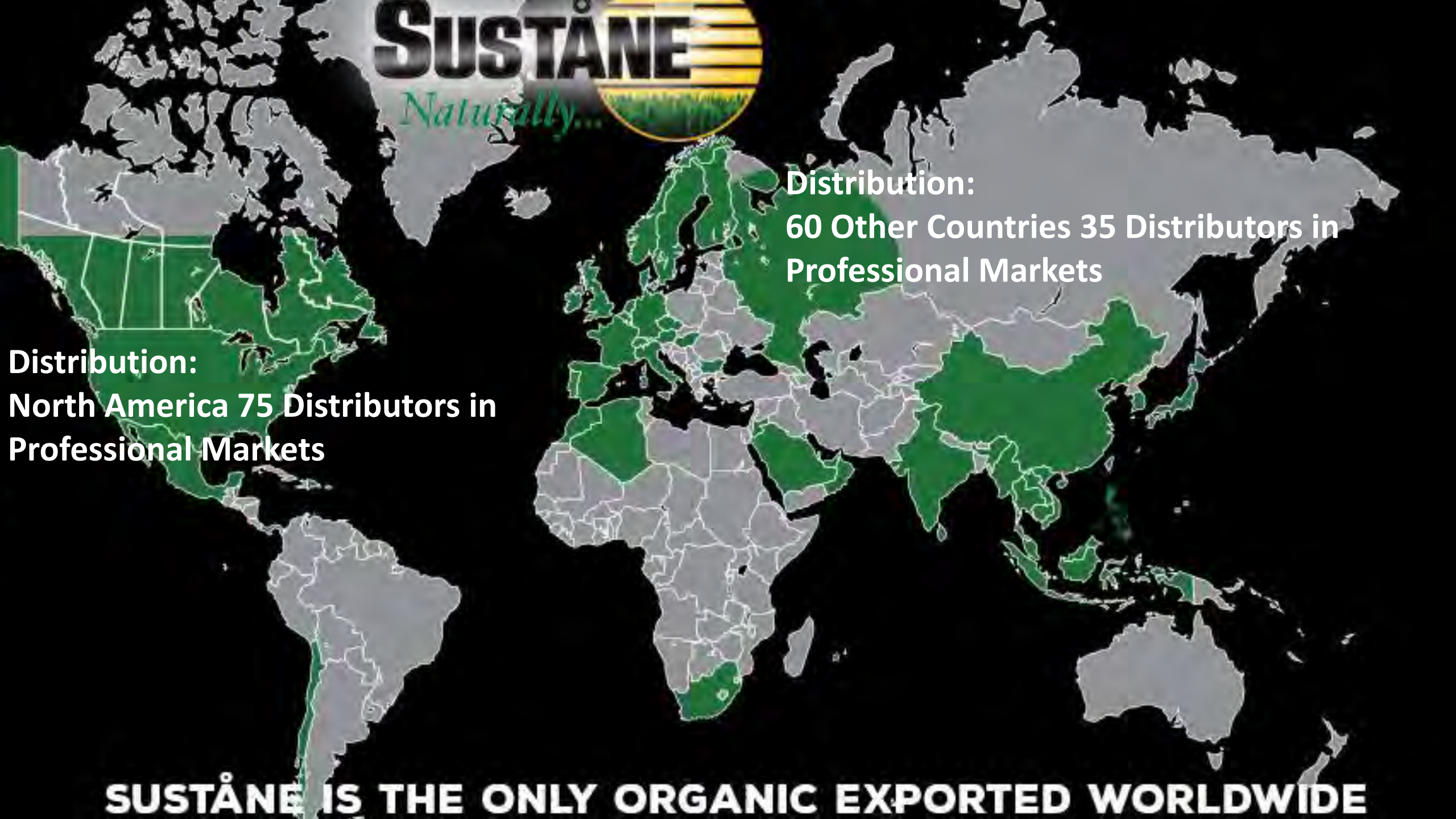
MICHIGAN PEAT COMPANY

Organic MECHANICS
Potting Soil

IMC International Mulch Company



Jiffy® – The Original.



Distribution:
60 Other Countries 35 Distributors in
Professional Markets

Distribution:
North America 75 Distributors in
Professional Markets

SUSTÅNE IS THE ONLY ORGANIC EXPORTED WORLDWIDE

It is the integrity, quality and dedication of people that drive the success of any business!



Sustane Natural Fertilizers

...healthy soils, for a healthy planet.

Better resource management for a Sustainable world

"Thank you for your time and for sharing this great part of the world with me."





Audience Q & A

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GLOBAL SOCIAL ENTERPRISE INITIATIVE
GEORGETOWN UNIVERSITY McDonough
SCHOOL of BUSINESS

RURAL OPPORTUNITY INITIATIVE
Private Investment Driving Rural Prosperity



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