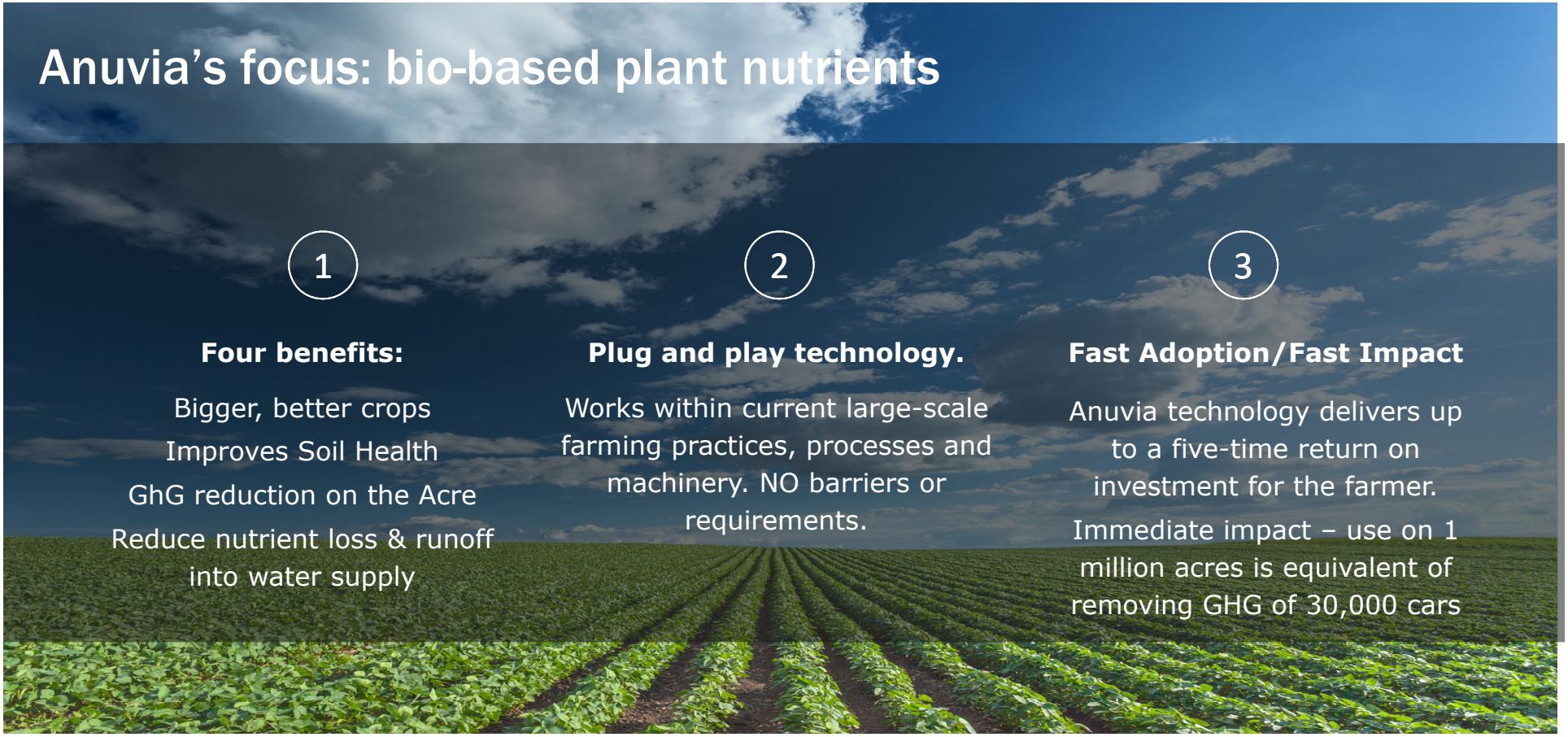
New Vistas for the Plant Nutrient Industry

November 21, 2019

Anuvia's focus: bio-based plant nutrients



1

Four benefits:

Bigger, better crops

Improves Soil Health

GhG reduction on the Acre

Reduce nutrient loss & runoff into water supply

2

Plug and play technology.

Works within current large-scale farming practices, processes and machinery. NO barriers or requirements.

3

Fast Adoption/Fast Impact

Anuvia technology delivers up to a five-time return on investment for the farmer.

Immediate impact – use on 1 million acres is equivalent of removing GHG of 30,000 cars

Already used on *over 1 million acres* of cropland in the USA

Agricultures Current State

- Farmers are Tech Friendly
  - Receptive to New Technologies
  - Have transformed farming - rapid change
  - Increased interest in new fertilizer technologies
- Closer connectivity - Food Company and Farmer
- Heighten societal and political interest in Agricultures impact on Environment
  - Nutrient loss
  - GHG impact
  - Soil Health
- Push for Sustainable strategies

What's driving sustainable agriculture

Public and private forces are aligning to shift production agriculture toward more sustainable practices:

ProjectGigaton™

Consumer-facing companies like Walmart and Campbell Soup Company are creating demand in their supply chains for sustainably grown grain.

Walmart committed to 75% of its grain supply to come from sustainable practices by 2020.

Cargill Smithfield Tyson Kellogg's PEPSICO General Mills the Wonderful company

Food companies and agribusinesses have committed to improved practices on more than 20 million acres of corn, half-way to what we've calculated to be the tipping point for sustainability to become the norm.

Current Challenges with Plant Nutrition Strategies

- Inefficiencies in current practices
  - Loss of nutrients
  - Economic impact
- Environmental Impact
  - Nitrate and Phosphate impact on watersheds
  - Contribution to GHG footprint of Agriculture – Estimated at 10% by EPA
- Degradation of Soil Quality
  - Nutrient efficiency reduced
  - Water utilization and quality reduced

Our Journey

- **Progress incremental & steady**
- **Each year confirming assumptions and adjusting**
- **Adapting to the changing market dynamics**
- **Staying focused on the Goal to bring this important technology to the market**

• Our Early Questions

- Could our technology help improve nutrient efficiency for large scale Agriculture
- Can we produce a product that can plug into current practices
- Did our technology bring real measurable improvements
- What were the tangible benefits to the farmer and our industry
- Could re process multiple sources of Ag produced substrates
- Did our products provide positive economics

Novel Technology

- US and International patents issued
- Uses multiple sources of organic materials
  - Animal organics
    - Digested manures
  - Ag Industrial organics
    - Peanut Hulls
    - Nut Hulls
    - Soy protein
    - Whey
  - Food Waste
  - Wastewater organics

Organic Materials Neutral

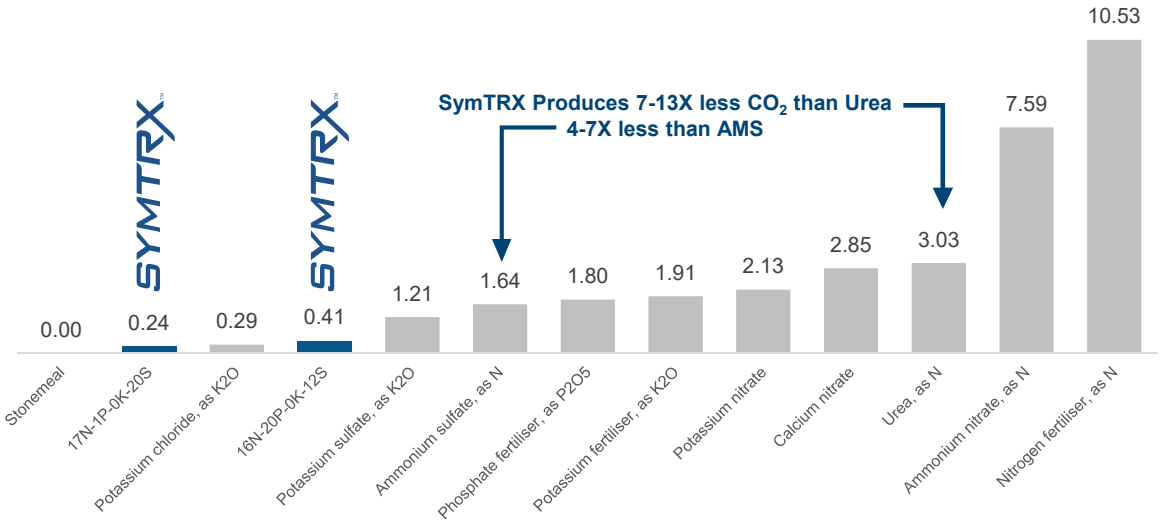
Positive Carbon Footprint

Manufacturing – Cradle to Gate

- Assessment completed by Environmental Management Resources (ERM)
- Anuvia products have a smaller carbon footprint
- Contributes to reducing GHG emissions from Agriculture

Anuvia's Fertilizers vs Commercial Inorganic Fertilizers (kg CO2e/kg product)

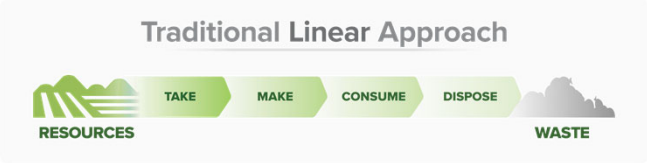
Source: Study Completed by ERM



- The processes used in the comparative analysis consider the Ecoinvent® global market processes (not specific to USA), without transportation to the client.
- Anuvia's products showed best performance related to Carbon Footprint compared to commercial inorganic fertilizers analyzed.

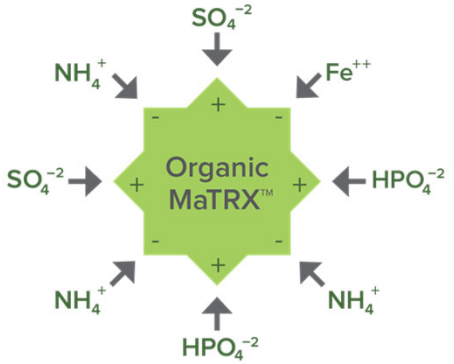
Enabling the circular economy

- Anuvia utilizes organic feedstocks – recycling back to the land to feed the soils and improve soil health
- Recycles nutrients that would be bound in organics (eg. Phosphate in Smithfield manure)
- Enabling – Sustainable Solutions
  - Influence of Big Food on production Agriculture – Driving sustainable strategies
- Strategic partners
  - Smithfield Foods
  - A tangible example of Field to Table strategies
  - Recycling organic materials back into agriculture
  - Nutrient recycling



Anuvia Technology – How it works

- Reaction process attaches inorganic nutrients (N, S, P) to the charged amino acids forming the Organic MaTRX
- Organic MaTRX releases bound nutrients over time
  - 65% of nitrogen release in first 2-3 weeks; 35% over the next 4-6 weeks
- Organic matter (OM) serves as a docking site for the nutrients - products deliver up to 16% OM back to the soil
  - Microbes feed on the Organic MaTRX and break the bonds between the amino acids and the nutrient
- Current products deliver Nitrogen, Phosphorus and Sulfur
  - Ability to serve as carrier for other nutrients



Cation and anion absorption (sequestration) by organic matter (OM)

Microbes feed on bonds

Unique Fertilizer Technology – Three Segments

SYMTRX™

Commercial Agriculture

GREENTRX™

Commercial Lawn Care

ANUGREEN™

Consumer Lawn Care

SymTRX: Enhanced Efficiency Homogenous Multi-Nutrient

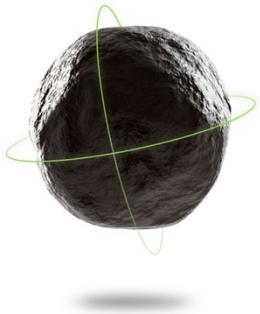
SYMTRX 20S™ 16-1-0-20S

SYMTRX 10S™ 14-24-0-10S

- Nitrogen as Ammonium N
  - Most efficient form of N used by crops
- Sulfur as Sulfur Sulfate
  - Plant available source of sulfur
- Phosphate as Orthophosphate

High Quality Product

- High Commercial Quality:
  - Spherical granules
  - Size 300 SGN
  - 6-8 # hardness
  - Dry = >98% solids



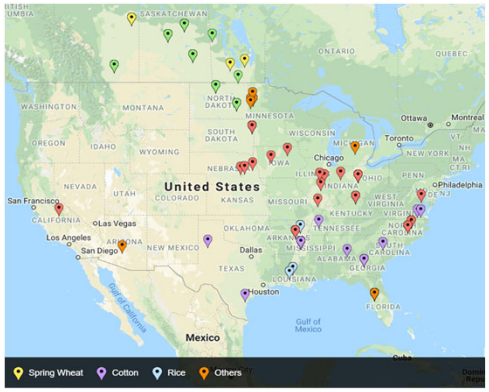
- Uses proven granulation equip

Consistent with current agricultural practices

Anuvia's product provides Sustainability with Profitability

Replicated research trials "creating high confidence"

- 100+ trials University and Private Research trial completed
- Across multiple crops
- Across USA and Canada



SymTRX incremental cost per acre ~$5/acre

Crop	Corn	Cotton	Rice	Canola	Overall
Ave. yield advantage /Acre	7.3 bu	67.5 lbs	7.1 bu	2.3 bu	N/A
% yield increase	3.8	5.6	4.2	7.9	4.9
Incremental Ave. net revenue ($)/acre	$17.8	$40.0	$29.0	$20.6	$24.5

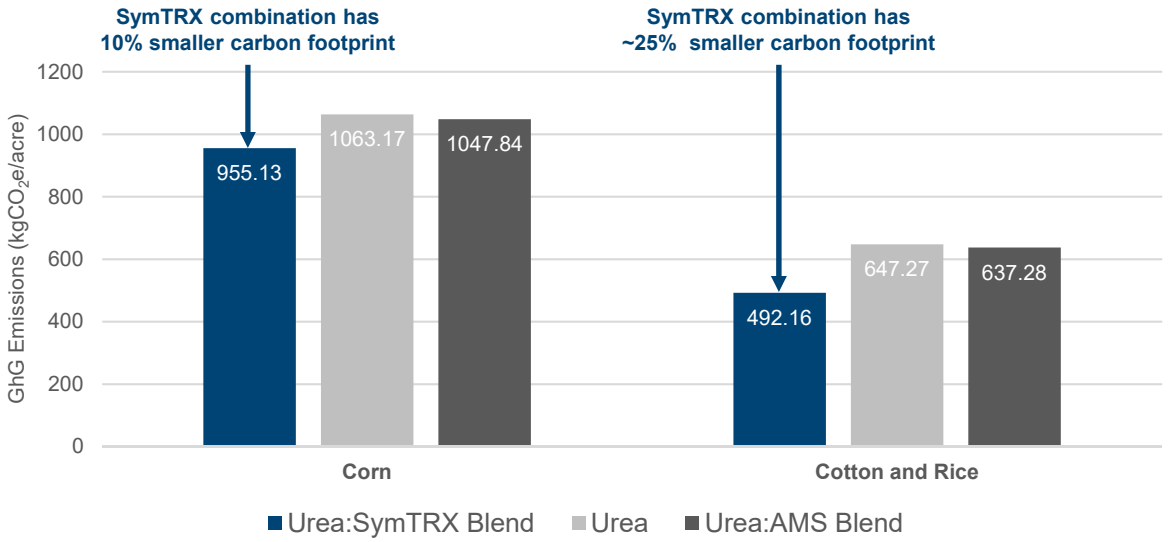
Source: Anuvia 3rd Party Trial data [1] Data collected from 2016–2018

Impact with Significance

Cradle to Grave

- Drop in replacement for a portion of Urea or AMS provides instant reductions in Agriculture's carbon footprint
- Reduction of GHG per acre compared to standard practice
- 1 Millions acres results in a reduction of GhG up to 170,000 tons or equivalent removing up to 30,000 cars

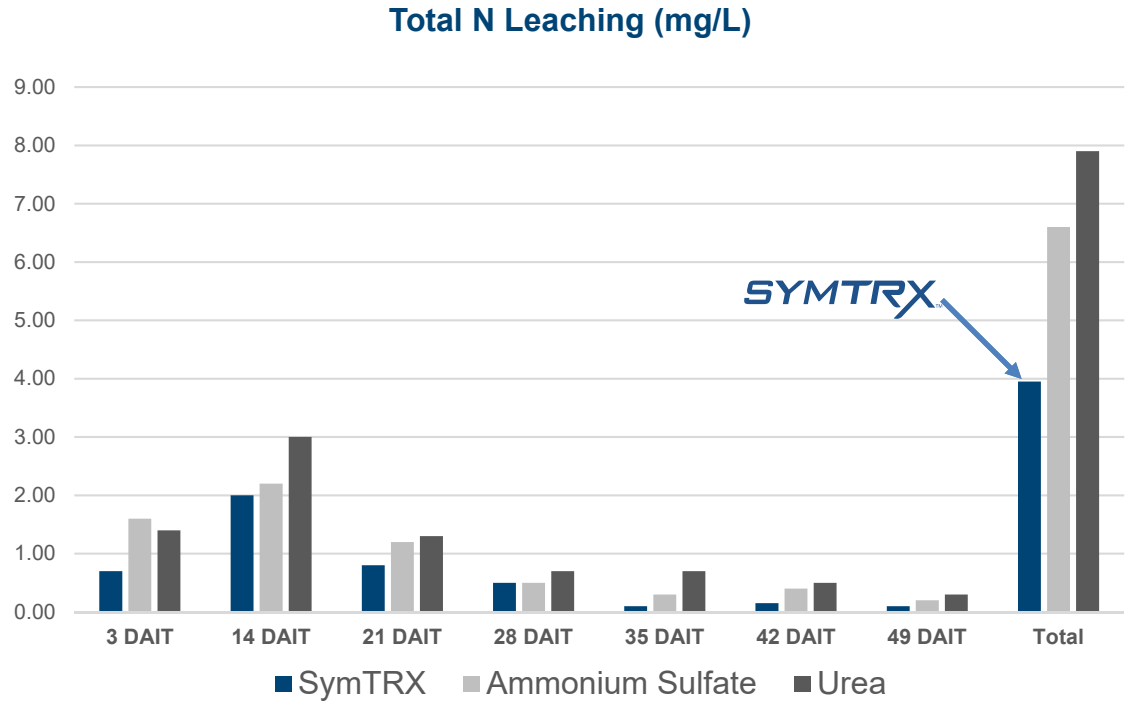
Anuvia Fertilizer Carbon Footprint



- GHG reduction correlates with amount of SymTRX used in crop blend
- Corn = high nitrogen (urea larger part of blend)
- Cotton/Rice = less nitrogen required (SymTRX larger portion of blend)

Anuvia's products improve nutrient utilization

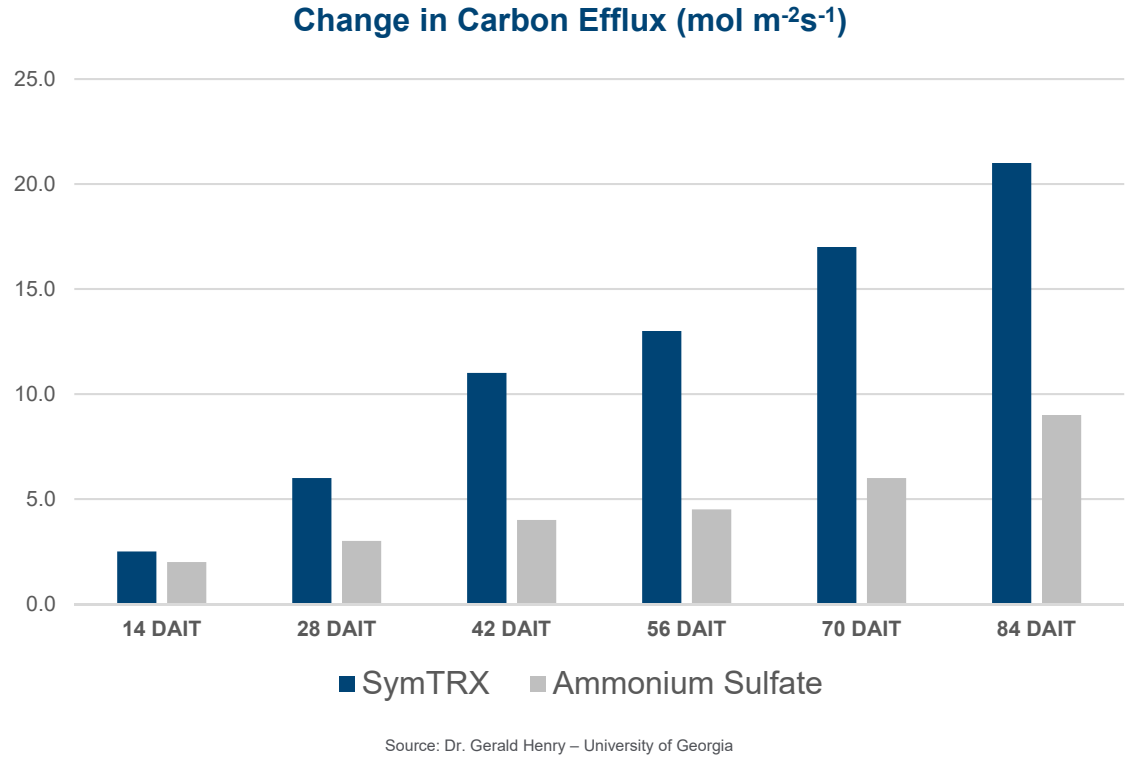
- Independent University research compared nitrogen leaching of Urea, AMS and SymTRX
- SymTRX use resulted in a
  - 39.9% reduction vs AMS
  - 50.2% reduction vs urea
- SymTRX reduces loss of nutrients into the environment



Source: Dr. Gerald Henry – University of Georgia

Feed the Plants and the Soil

- Carbon efflux studies look at microbial activity in the soil – higher respiration indicates healthy more active microbial populations
- SymTRX feeds microbes increasing microbial activity – contributing to soils ability to regenerate
- Have started a 3 year study looking at soil health



Source: Dr. Gerald Henry – University of Georgia

Anuvia's current plant already runs at scale

- Production plant operating since 2016
- Zellwood's established operating capacity at 72,625 tons of capacity
- New large-scale production facility in partnership with **The Mosaic Company** to provide up to 1.2 million tons for Ag Markets

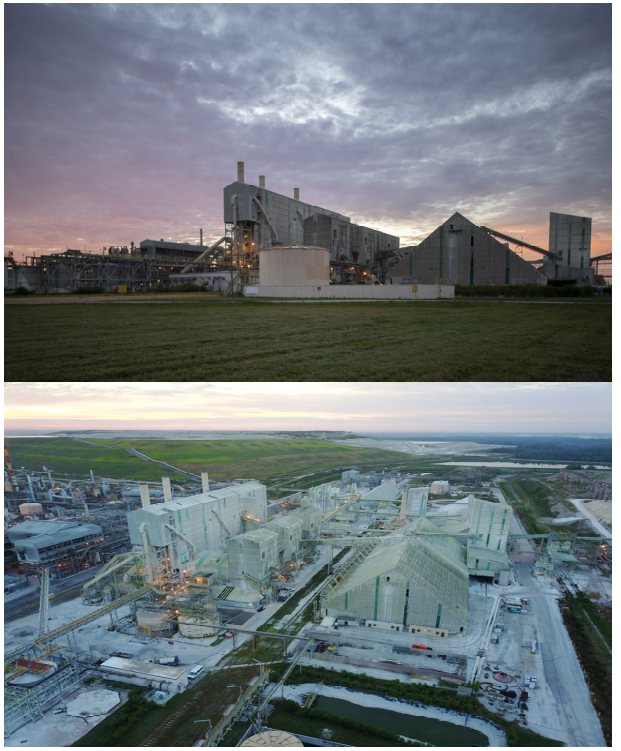
Zellwood, FL Facility

Customers

Barrett Farm Service

Anuvia – Mosiac Manufacturing Relationship

- A manufacturing relationship
  - Long term lease of the Mosaic - Plant City manufacturing facility
  - Site to be retrofitted to manufacture Anuvia's bio-based products
  - Provides viable economics to manufacture a bio-based nutrient product with scale
- Site provides
  - Production capacity of up to 1.2 million tons of product
  - Scalability – 3 lines that can be phased into production – Balance Supply and Demand
  - Meaningful storage to stage product
  - Direct line rail to serve the market
  - Efficient access to water to serve both domestic and international market.



Anuvia & Mosiac Relationship

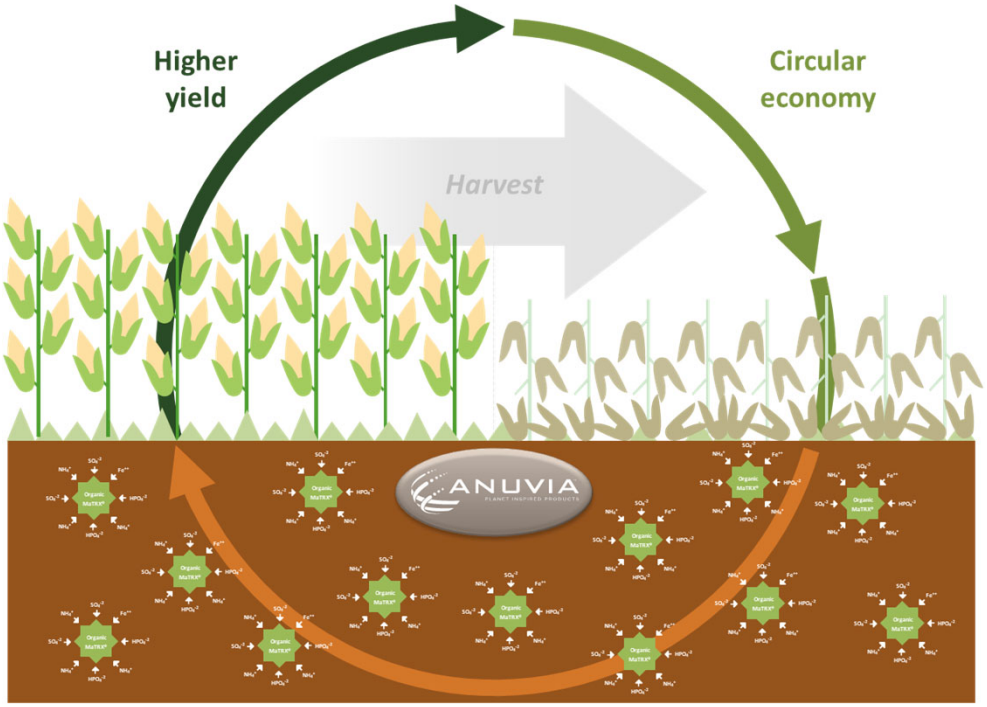
- Multi Facetted Relationship
  - Mosaic has made an equity investment in Anuvia
  - There will be a raw material supply relationship where Anuvia will source some of its chemical needs from Mosaic
  - There may be opportunities to partner in the logistics of product supply
  - Exploring the potential to partner on the commercial side

SymTRX – The Future of Fertilizer

Benefits for the Farmer	
Improves yield	✓✓
Enhances soil health	✓
Delivers organic matter back to soil	✓
Stimulates soil microbes	✓
Provide a positive ROI	3-5X ROI
Benefits for the Planet	
Reduces GHG emissions	✓
Re-uses organic matter	✓
Slow-release nitrogen – improved plant utilization	✓
Minimizes nutrient leaching and volatility – improves water quality	✓

Anuvia's products address the economic and ecological challenges of agriculture

- ✓ Nutrient retention = More yield = More profit
- ✓ Less environmental impact
- ✓ Improved soil health
- ✓ Reuses agricultural and animal substrate
- ✓ Proven in the field



Awards & Recognition

SymTRX

2019 Product of the Year

Environmental Leader Awards

Anuvia

Honorable Mention

Fast Company's 2019 World Changing Ideas Award

Anuvia

Winner

2019 Business Intelligence Group BIG Innovation Awards

Anuvia

Product of the Year

2019 Business Intelligence Group BIG Innovation Awards

Anuvia

Winner

2018 Seal (Sustainability Environmental Achievement Leadership) Awards

Anuvia

Finalist

2018 InnoSTARS Innovation Competition

Anuvia

Bronze for Sustainability

2017 Edison Awards

ANUVIA™

PLANET INSPIRED PRODUCTS