PLUG AND PLAY

NOVEMBER 19-21 2024

SILICON VALLEY SUMMIT

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THANK YOU TO OUR PARTNERS!

BREMER BANK

AMERICAN NATIONAL

Mosaic

Farm Credit Services of America

AMERICAN AGCREDIT
MONEY FOR AGRICULTURE

CoBANK

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NEW NINE-MONTH PROGRAM

SV SUMMIT

Tech Explorations

Informational event led by subject-matter experts geared to drill down into a specific topic area defined by the **partners**' given interests. **Startups** may be invited to pitch.

- 1-2 hours
- Anywhere
- Virtual

Startup Programming

Informative content **for batch startups**. Corporate partners, investors and mentors are also invited to participate.

- 8 months
- Anywhere
- Virtual

Workshops

Content experts will lead business development educational sessions for batch **startups**, who will have the opportunity to interact with and ask questions of the presenter.

Mentor Sessions

Industry Experts & Corporate Advisors will be matched with **batch startups** based on startups' needs and pain points.

Pod Power Hours

Program alumni will share their founders' story and experience centered around a specific topic, after which **startups** will have the chance to discuss in whole and small group settings.

SEPTEMBER · OCTOBER · NOVEMBER · DECEMBER · JANUARY · FEBRUARY · MARCH · APRIL · MAY · JUNE

Batch Kickoff

Kickoff event focused on **corporate** <> **batch startup** networking and an introduction to the verticals' tech focus areas.

- 1 day
- Chicago (TBD)

Startup Orientation

Orientation for batch **startups:** meet the Plug and Play,; become familiar with available resources, program cadence, etc.

- 2 weeks, 4-6 hrs
- Anywhere
- Virtual

Corporate Focus Weeks

Partners will pitch to **startups** about collaboration opportunities. **Partners** will then begin meeting with their priority **startups**.

- 1 day, 2-3 hrs
- Anywhere
- Virtual

Topeka Innovation Week

Multi-day event featuring pitch sessions, meetings with regional resources, and a golf tournament! Other alumni and regional startups are also invited to attend.

- 3 days
- Topeka, KS

November Summit

Content event for **partners**: breakout sessions, meetings, and pitches from portfolio and alumni startups. **Batch startups** are welcome to attend but will not pitch.

- 3 days
- Sunnyvale, CA

Topeka Expo

Official graduation event hosted in Topeka: industry content, pitches and demos from **batch startups**, and networking. Additional content for startups will be offered.

- 3 days
- Topeka, KS

Sunnyvale Summit

Bonus pitch and demo opportunity for **batch startups**. Event also provides ample opportunity to network.

- 3 days
- Sunnyvale, CA

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NEW PROGRAM HIGHLIGHTS

Batch Kickoff Event





Partners and batch startups gathered in Chicago to kickoff the new program and kickstart their relationships.

Topeka Innovation Week





Batch and other area startups toured the innovation facilities of local universities and learned more about the resources the Midwest has to offer.

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SV SUMMIT

BATCH 10























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NEW PARTNER

go topeka



*The Go Topeka / Kansas State University partnership has resulted in **NINE** tech validation or research & development projects so far!*

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AWARD



Washburn University Pitch Competition

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ECOSYSTEM HIGHLIGHT

Karen Warner

CEO

Beam Circular

#PNPTCSiliconValley

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BEAM CIRCULAR

BIOECONOMY • AGRICULTURE • MANUFACTURING

Transforming waste into community prosperity
and a healthy environment for all



Organic waste is a global challenge… and opportunity

Food & ag waste is a lead source of methane emissions and is costly to manage for farmers, food processors, and communities.









CA is on track to produce
56 million tons
of organic waste annually by 2045.

Circular Bioeconomy

Using biology to produce useful products and reduce waste



FEEDSTOCKS (BIOMASS)
agricultural residues, wood & forestry residues, municipal solid waste / green waste, food processing byproducts, wastewater sludge



CONVERSION
biological (fermentation, anaerobic digestion), chemical, thermochemical (pyrolysis, gasification)

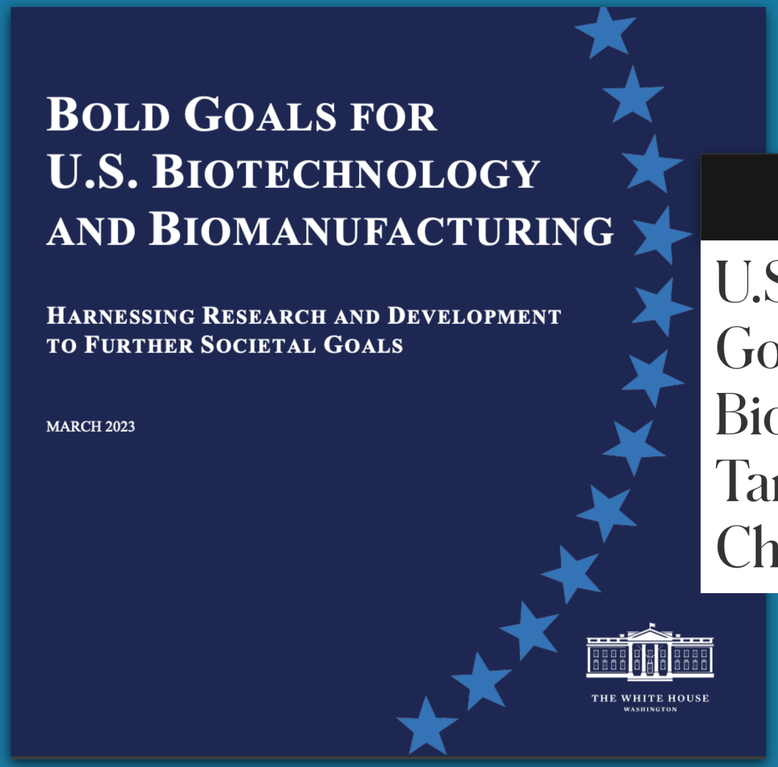
Sustainable technologies



PRODUCTS
fuels, chemicals, solvents, detergents, plastics, films, fabrics, polymers, ag inputs, food additives, fragrances, alternative proteins, construction materials

National & Global Momentum Toward Bioeconomy





Forbes

U.S. Government Sets Bold Goals For The U.S. Bioeconomy – Including A Target For 30% Of Bio-Based Chemicals

$29 billion in public and private sector biomanufacturing investments for projects across the country since 2021.

But! Biotechnologies face barriers to scale

Research & Development

Micro Scale
< 1 mL, HT
“Test Tube Scale”



Bench Scale
100 mL – 20 L
“Cup/Gallon Scale”



Scale-Up

Pilot Scale
50 L – 1000 L
“Bathtub Scale”



Manufacturing

Demo Scale
10 m^3 – 50 m^3
“Swimming Pool Scale”

Commercial Scale
100 m^3 +
“Large Grain Silo Scale”



Industry Gap / Valley of Death

California’s agricultural heartland is uniquely positioned for scaling industrial biomanufacturing.





Certified Bioeconomy Development Opportunity Zone

BIOECONOMY DEVELOPMENT OPPORTUNITY ZONE PROGRAM

CERTIFIED ‘AA’

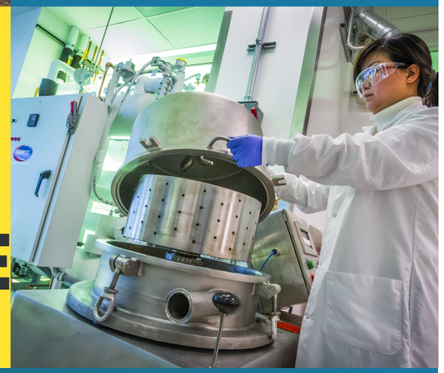
BIO ECO NOMY



MANU FACTU RING



AGRI CUL TURE



BioEconomy, Agriculture, & Manufacturing (BEAM) Initiative:

a regional strategy for global leadership in the circular bioeconomy

BEAM Portfolio

Public-Private Projects & Programs to Support Circular Bioeconomy Scale-Up

- Community & Collaboration
- Enabling Infrastructure
- Workforce Development
- Innovation
- Access to Capital



HawkTower
EARLY-STAGE VC FOR CALIFORNIA'S FUTURE

The Reservoir
SUPPORT TRAILBLAZING STARTUPS

Western Growers

BASF
We create chemistry

Berkeley Lab

california almonds
Almond Board of California

California Jobs First

Enduring Planet

the march group

Ponderosa

University of California
Agriculture and Natural Resources

California Farm Bureau

Gallo

Hawkwood

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Schreiber Ventures

CA Bioindustry Innovation & Scale-up Campus







- Global center of excellence for zero-waste biomanufacturing
- Pilot/demo facility will help firms move from lab to commercial scale
- Community space & visitor center
- Workforce training integration

Public-Private Project; multiple investment partnership tracks available

$55+ million in public and private capital mobilized in first 2 years

- $10 million investment from Stanislaus County (ARPA)
- $3.6 million Economic Development Pilot Grant (CA Jobs First)
- $1 million National Science Foundation Engines Development Award
- $11.2+ million in early private/philanthropic grants

$25.8M grants

local | state | federal | industry | philanthropy

$30 million in venture capital committed by HawkTower to support circular bioeconomy startups in the North San Joaquin Valley over the next decade.

CBIO Collaborative - Welcoming Partners



BEAM CIRCULAR

BIOECONOMY • AGRICULTURE • MANUFACTURING

Let’s collaborate!

Opportunities for startups, corporates, and investors

www.beamcircular.org

Karen Warner, Founder & CEO
karen@beamcircular.org



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Startup Pitches

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STARTUP EMCEE

Stefano Olcese

Ventures Analyst

Plug and Play Tech Center

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STARTUP PRESENTATION

CHONEX

CHONEX

Helping farmers rebuild their topsoil & increase their profitability

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CHONEX

Supercharging Regenerative Agriculture



We are **a soil health company**, driving a global revolution in regenerative agriculture and soil restoration.

We have developed, proven, and patented our flagship product, **StrongSoil®**, which offers a scalable, high-impact solution to enhance soil vitality, boost crop yields, and reduce reliance on synthetic inputs.

We have made significant progress since graduating PnP

2018-2020

- Founded the company
- Partnered with Cal-Maine
- Raised $1.5M in capital

Initiated R&D, bench tests
Developed BSF nursery system
Built pilot plant
Validated biological process
Secured first sale in NorCal cannabis

2021-2022

- **Graduated Plug and Play**
- Conducted first Ag field trial
- Pivoted to row crops
- Raised $6M seed capital

Grew team
Designed StrongSoil®
Onboarded advisors
Designed commercial plant
Completed first field trials
Initiated IP & patent work
Survived Hurricane Sally

2022-2024

- Changed to free-flow activation

Optimized application rate
Launched WDG formulation
Introduced StrongSoil®
Got strong Biome Makers feedback
Secured US utility patent
Initiated strategic talks
Endured tough capital market

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Farmers everywhere are struggling with degraded soils





95% of food production relies on soil[1]

>**50 billion tons** of Midwest topsoil has eroded[2]

By 2050, soil erosion may **cut crop yields by 10%**[3]

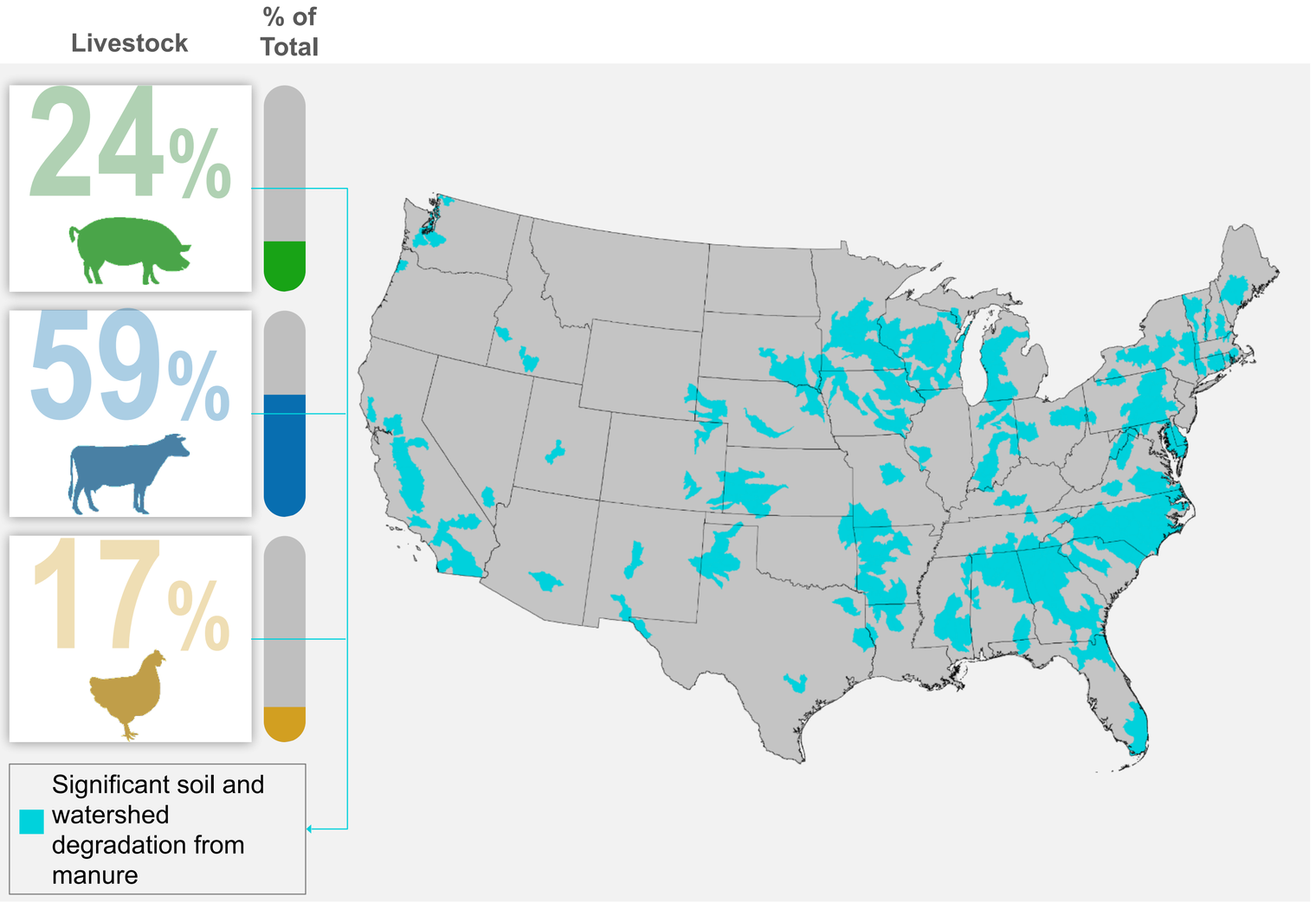
From ‘95 – ‘22, **$170B** was paid out in crop insurance[4]

Soil degradation could cost **$23 trillion** by 2050[5]

1. FAO 2. Smithsonian Magazine 3. United Nations 4. USDA 5. NRDC

U.S. farmers need a way to sustainably manage poultry manure

9+ billion chickens in the US produce **200+ million wet tons** of manure annually creating a large environmental footprint



1. USDA

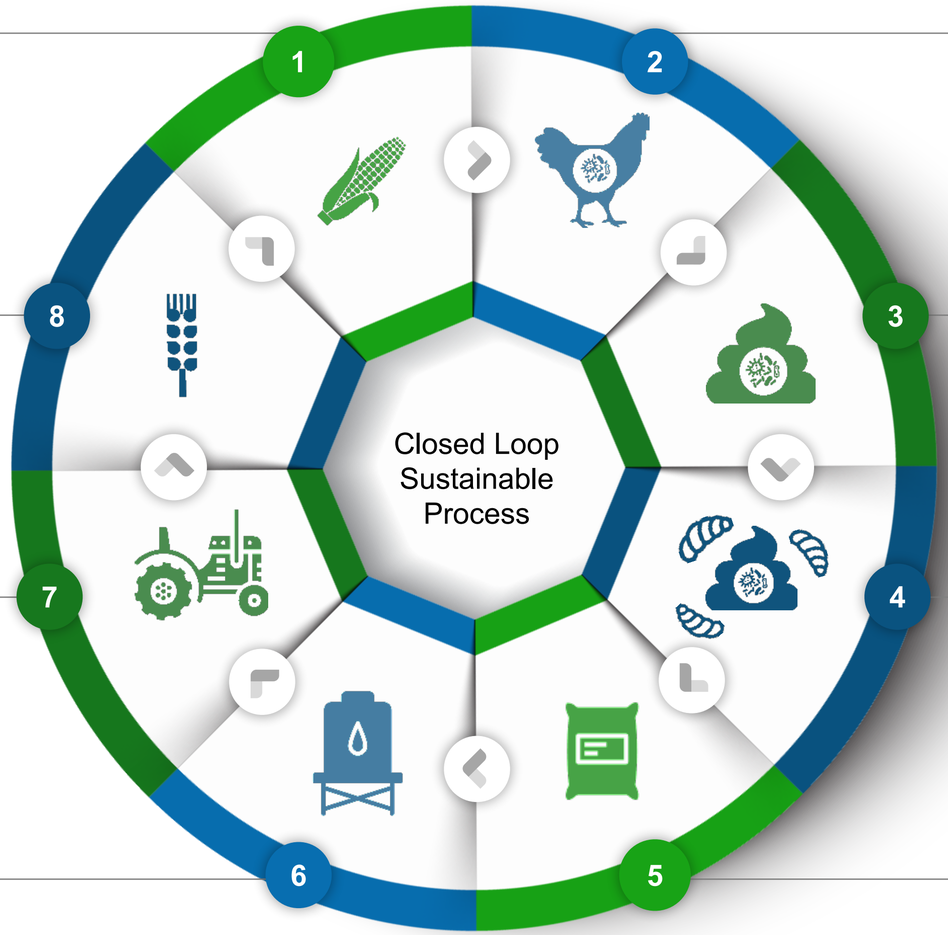
THE SOLUTION

Manure Management

Degraded Soil

Chonex's proprietary, sustainable soil health system

1. Grain-based animal feed
2. Feed digested by chicken gut microbiome
3. Microorganisms and excess nutrients passed to waste
4. Larvae processing to eliminate all pathogens and add beneficial enzymes
5. Select for beneficial microbes and create shelf-stable product
6. Mix & go StrongSoil™ WDG formulation
7. StrongSoil™ compatible with all agricultural equipment
8. Reduce inputs and improve soils & crops



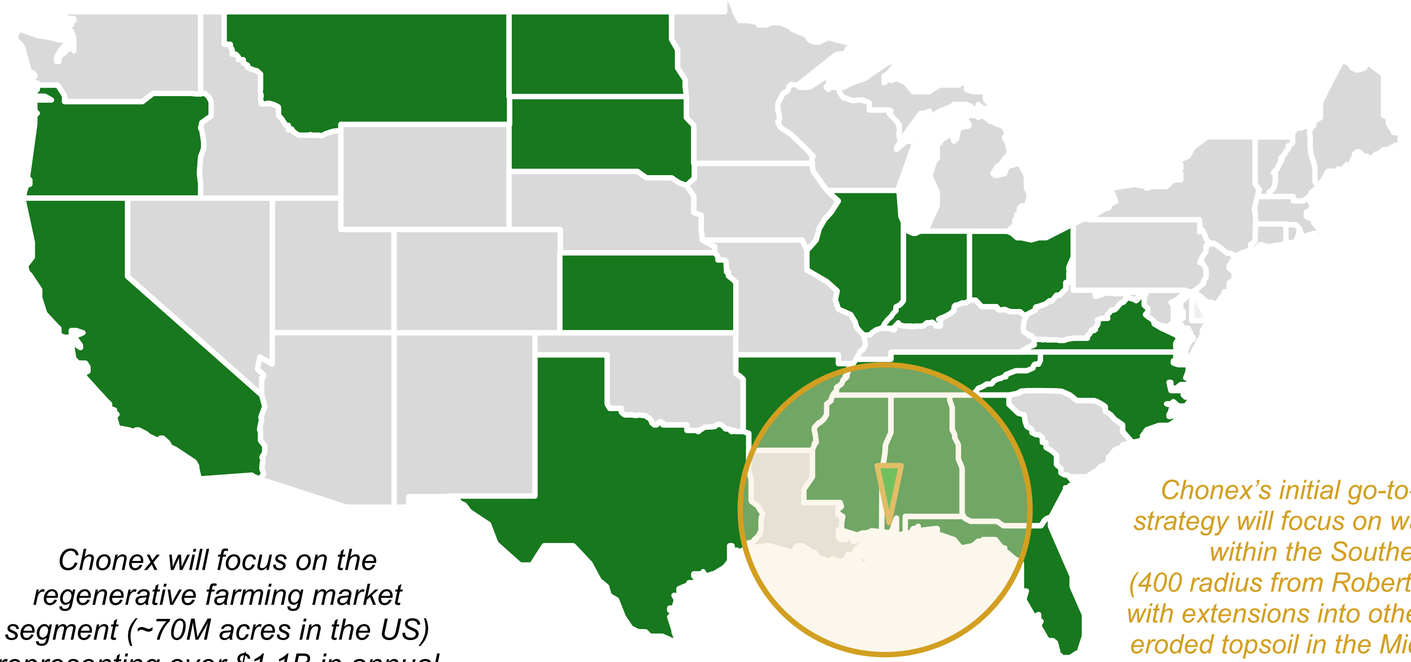
Chonex has built strong traction on farms across the U.S.

18 States

40 Growers

200 Field Trials

10 Crop Types



Chonex will focus on the regenerative farming market segment (~70M acres in the US) representing over $1.1B in annual market potential[1]

Chonex's initial go-to-market strategy will focus on warm leads within the Southeast (400 radius from Robertsdale, AL) with extensions into other areas of eroded topsoil in the Midwest and California



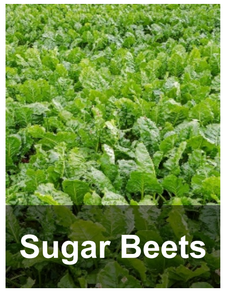


















Source: NuGIS, Cropcros, UC Davis, Web Soil Survey
1. Assumes (70m acres) x ($15/acre). Chonex's relationship with Understanding Ag could generate access for up to 40m acres alone

StrongSoil® Performance Matrix

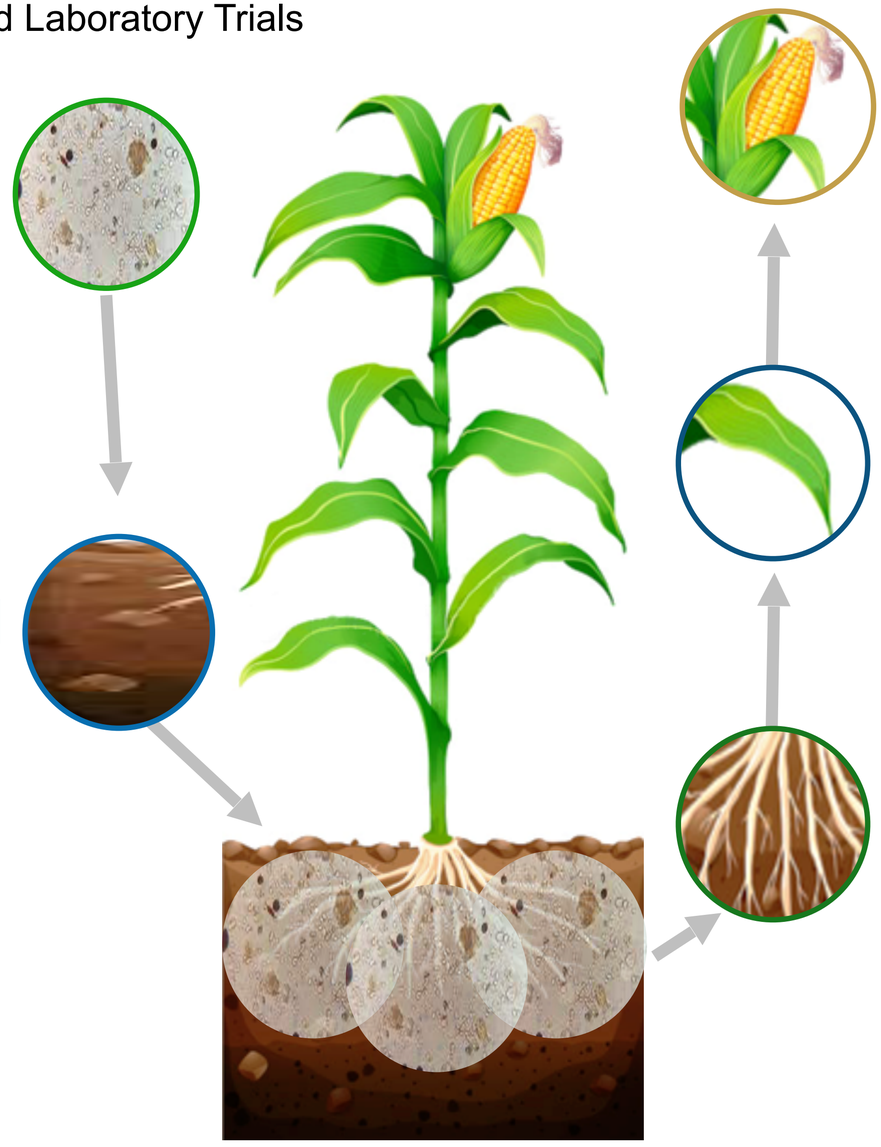
3 Year Demonstrated Results from Field and Laboratory Trials

Soil Microbiology

- Increased Total Biological Populations
- Increase in Biological Diversity
- Increase in Fungi
- increase in Beneficial Bacteria
- Increased Protozoa

Soil Structure / Dynamics

- Increased microbial activity in saline soils
- Compaction Relief
- Increase nutrient holding capacity
- Increased Water Holding Capacity (WHC) Space
- Improved Soil Aggregation Increased Pore
- Increased Carbon Sequestration



Crop Quality

- Increase in Protein Levels
- Increased Sugar Content (brix)
- Increase in Cotton fiber strength

Plant Performance

- Increase in yields for studied crops
- Increased tissue nutrient levels
- Improved Plant Stress, Pest and Disease Tolerance
- Better optimization of fertilizer, fungicide, herbicide utilization
- Increased germination success
- More seeds germinate quicker

Root / Microbe Interaction (Root Colonization)

- Stimulated root hair growth
- Increased root mass and depth
- Increased nutrient cycling
- Increased nutrient availability, release and root uptake

Source: Chonex

StrongSoil® “Real World” Results

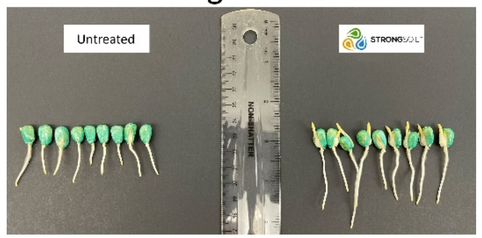
Trial locations included varied soil types, soil health status, weather conditions, pest infestations. All trials showed increase yield and crop quality

Germination

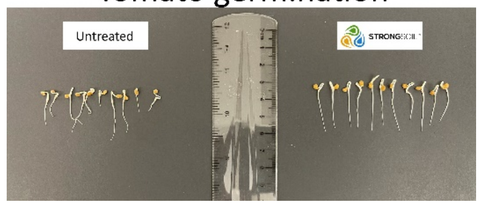
- Accelerates the plant seedling establishment
- Increase in germination rates across studied crops

Untreated STRONGSOIL™

Corn germination



Tomato germination



Tomatoes

- Yields increased
- BRIX (Sugar) level increased

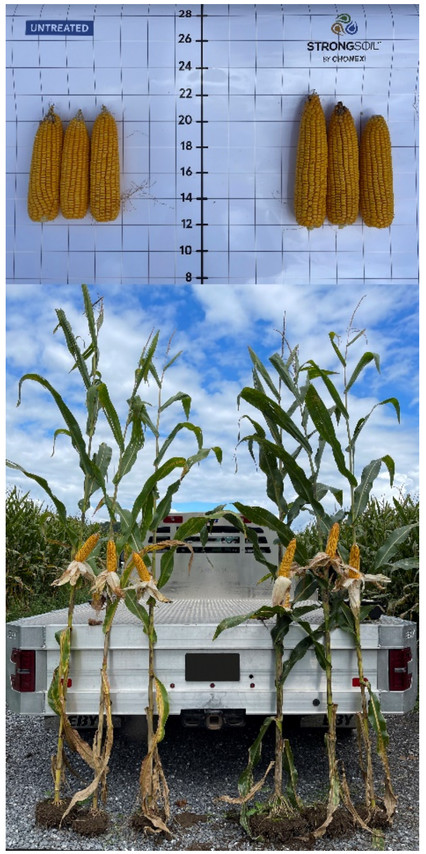
Untreated STRONGSOIL™



Corn

- Yield increased
- Protein increased

Untreated STRONGSOIL™



Soybeans

- Yield increased
- Protein increased

Untreated STRONGSOIL™



Cotton

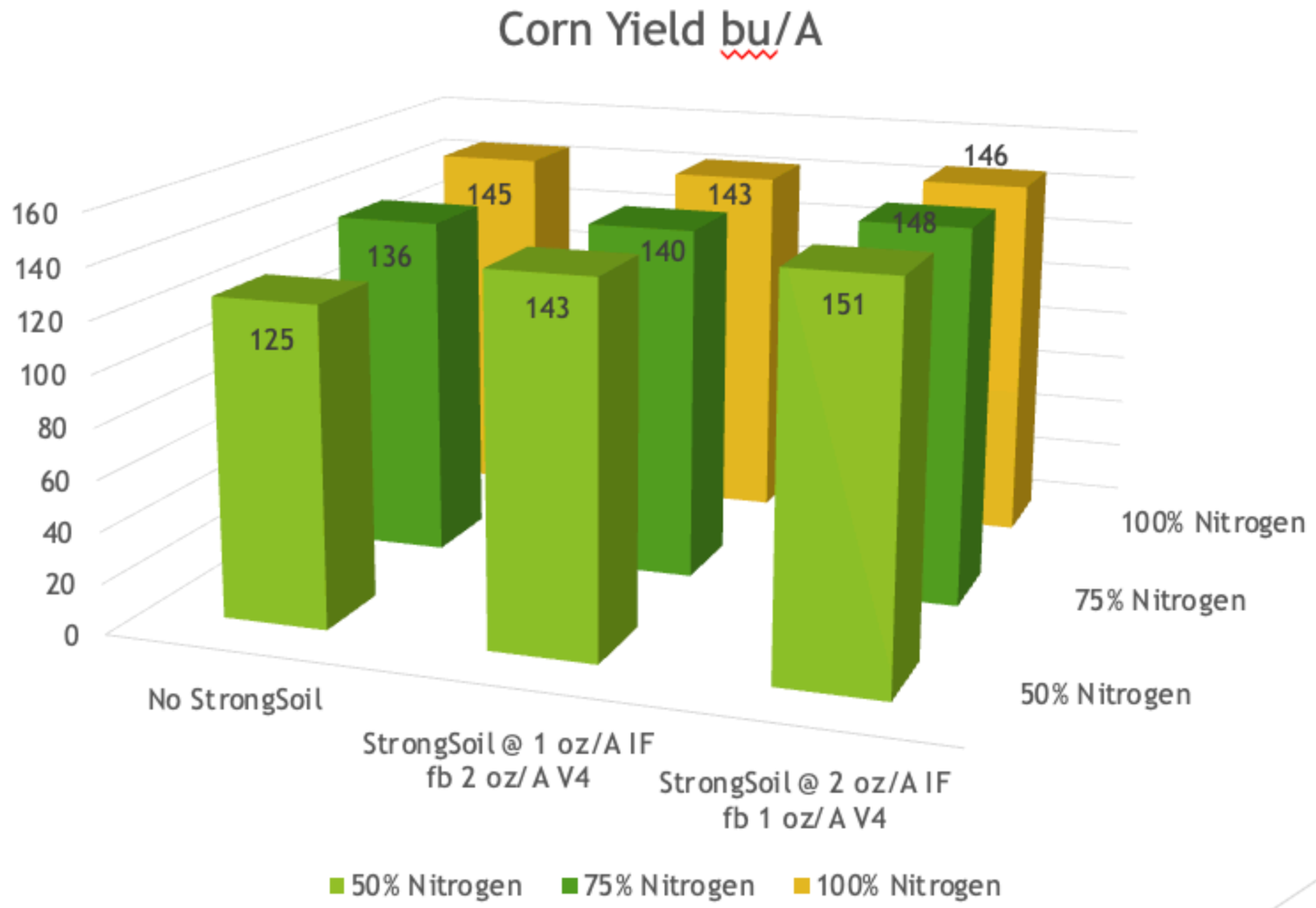
- Yield increased
- Fiber strength increased
- Fiber length increased

Untreated STRONGSOIL™



Source: Chonex

Reduced Nitrogen Response to Application of StrongSoil™ In Corn, Alabama-2024



StrongSoil® has attractive unit economics which are minimally dependent on raw material costs



1 ton
fresh manure



Produces
400 lbs
StrongSoil® WDG

At variable cost of $24 per lb[1]

6,400 acres
of coverage[2]

$48k
Gross Revenue[3]

1. *Average unit cost at steady state production*
2. *Assumes one pound covers 16 acres*
3. *Assumes distributor price of $120 per pound (before volume discounts)*

Substantial investments and sustainability requirements by leading corporates are driving explosive growth in regenerative farming



Nestlé

$1.3B
investment

Walmart

50M
acres committed to regenerative growing

Cargill

10M
acres committed to regenerative growing

General Mills

1M
acres committed to advance regenerative farming by 2030

pepsi

$216M
committed to regenerative agriculture projects in the U.S.[1]

Kellogg's

1M
farmers committed to advancing sustainable agriculture[2]

Source: Company Websites
1. AgFunder 2. Regrow

Advisors Have Been Critical In Validating The Chonex Story

Chonex's accomplished advisors have been deeply supportive of technological development and go-to-market strategies since inception

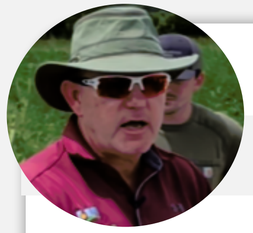


Dr. Pam Marrone

- **Founder & former CEO Marrone Bio Innovations**
- **Founder & former CEO AgraQuest**
- **Trustee Emerita, Cornell University**
- **Dean's Advisory Council, University of California Davis Agricultural & Environmental Sciences**

➢ Dr. Marrone has worked closely with Chonex on research and development through three years of field and laboratory trials, successfully validating Chonex's differentiated soil-health technology

➢ Dr. Marrone's extensive background developing critical AgTech IP, has been critical to Chonex in composing the Company's intellectual property portfolio



Dr. Allen Williams

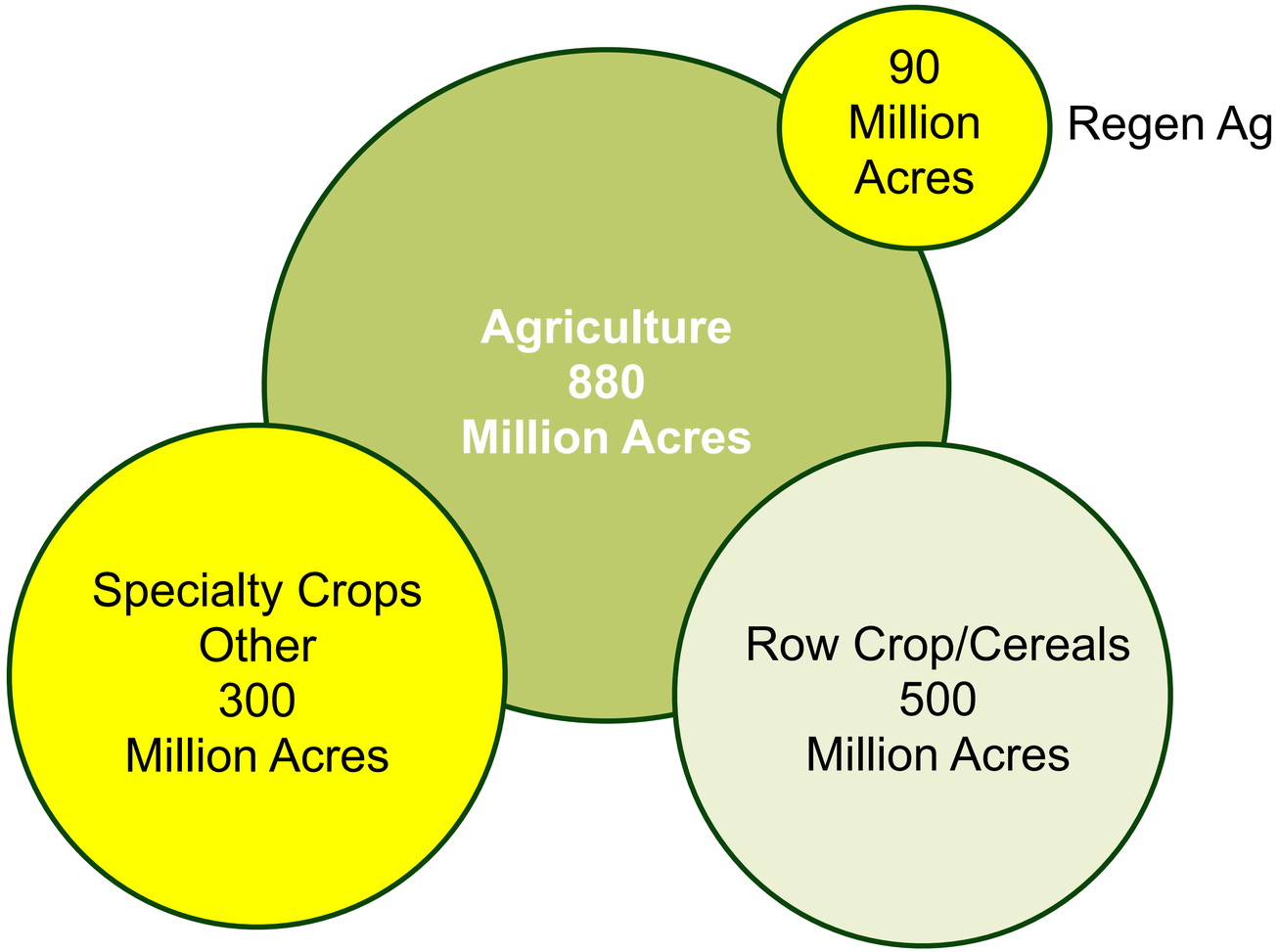
- **6th-generation family farmer helping to manage 32M acres**
- **Founding partner of Understanding Ag, Soil Health Academy, Grass Fed Beef, & Grass Fed Insights**

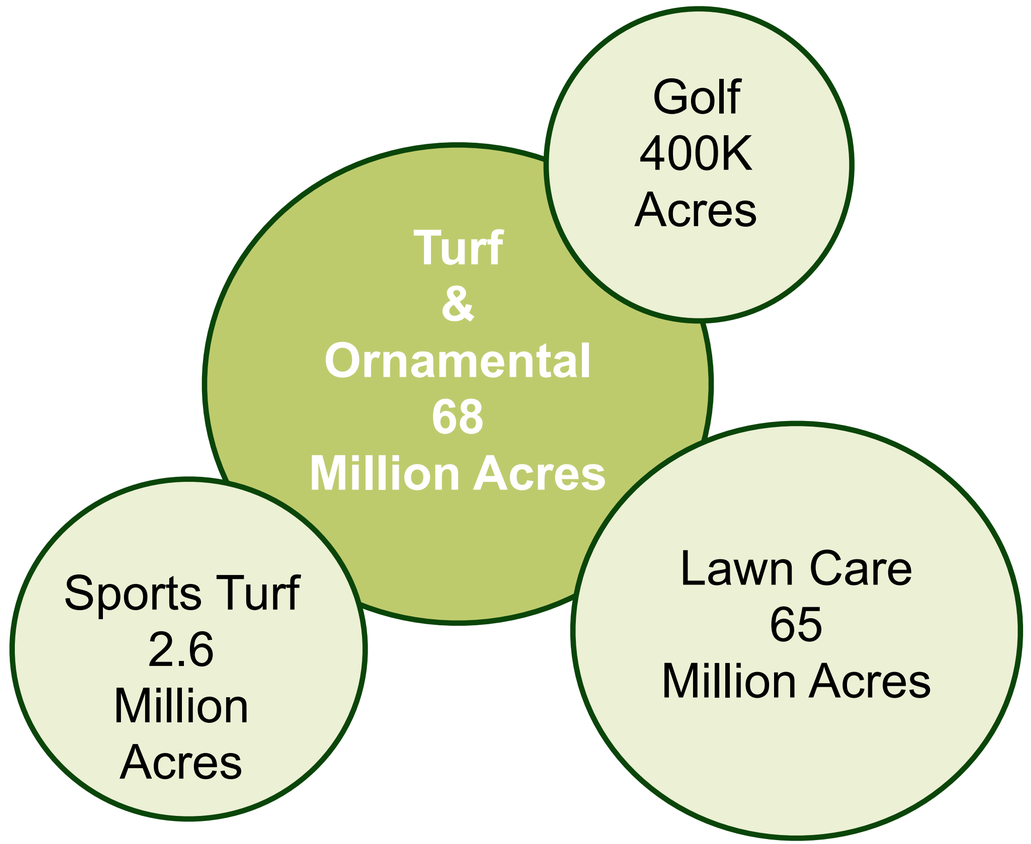
➢ Understanding Ag, a leading regenerative agricultural consulting firm, covers 40mm+ acres of land and advises on regenerative agricultural implementations and ecological principles to boost profitable farming and ranching operations

➢ Understanding Ag intends to initially **prescribe StrongSoil™ treatments for 1.5mm acres** of client farmland

➢ Dr. Williams has been instrumental in the development of Chonex advising on regenerative agricultural implementations

Where are we headed? Regen Ag and Specialty Crops





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We see a near term $40M opportunity

STRONGSoil U.S. Market Share Objectives

	Total Acres	Share Target	Acres	Avg Rate	StrongSoil Pounds	CHONEX Price	Gross Sale	CHONEX Margin
Regen AG	90,000,000	10.0%	9,000,000	1.5	843,750	$ 77.00	$ 64,968,750	$ 27,000,000
Specialty AG	300,000,000	1.0%	3,000,000	2	375,000	$ 77.00	$ 28,875,000	$ 12,000,000
Row Crop/Cereals	500,000,000	0.5%	2,500,000	1	156,250	$ 77.00	$ 12,031,250	$ 5,000,000
Golf Green&Tee	96,000	10.0%	9,600	10	6,000	$ 150	$ 900,000	$ 630,000
Golf Fairway	400,000	5.0%	20,000	4	5,000	$ 150	$ 750,000	$ 525,000
Sports	3,000,000	2.5%	75,000	4	18,750	$ 150	$ 2,812,500	$ 1,968,750
Lawns	65,000,000	0.5%	325,000	2	40,625	$ 100	$ 4,062,500	$ 2,234,375
Total	**958,496,000**		**14,929,600**	**0.10**	**1,445,375**		**$ 114,400,000**	**$ 49,358,125**

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Chonex Intellectual Property Strategy: Progressing Well

1. US utility patent application granted July 3, 2024
2. “Continuation” filing made to continue patent family
3. Two Patent Cooperation Treaty (PCT) applications have been filed for non-US coverage
4. Trade secrets covered by policy and registry
5. Trademarks are in place and being maintained

Chonex has proven it can produce at industrial scale with plans to expand

Seeking to build a ~$3.5M 15,000SF buildout of commercial plant (pending capital)

PILOT PLANT		15,000 SF BUILDOUT
7K	Annual lbs of StrongSoil™ produced (at max capacity)	170K
112K	Acre equivalent of product coverage[1]	2.5M
$840K	Potential gross revenue[2]	$20M







1. *Assumes 10% loss from roller mill processing*
2. *Assumes full capacity production and gross price of $120 per pound*

Chonex Management Team



Michael Lynch

CEO & Co-Founder

- 20+ Years in rural Start-up operations and scaling
- Led a statewide effort to bring Teach For America to Alabama, led Project Horseshoe Farm, and developed a remote tutoring program with Auburn University.
- Strong track record of developing innovative solutions for rural communities, focusing on supporting at-risk populations



Will Wright

COO

- 20+ Years in Biotech & Start-up operations and scaling
- Former Engagement Manager, McKinsey & Co. (NY Office) Led key healthcare strategy
- Founder & CEO, PackHealth (acquired by Quest Diagnostics).
- Head of Innovation, Protective Life
- Harvard Board of Advisors



Dr. Charles Snipes

Director of R&D

- Ph.D. Agronomist with 45 Years of Product Testing & Development
- Extensive experience in agricultural research and development.
- Founder of successful contract research business and directed 150+ annual crop trials across cotton, corn, soybeans, etc. while serving as CFO
- 6th generation farmer with deep agricultural roots



Butch Burkett

Operations / Quality

- 30+ years in industrial plant design, engineering, and production management
- President, Talon Aerospace
- VP Operations Jemison Demsey Metals, Steel Processing Facility
- President US Clay, Sodium Bentonite mining



Aaron Goy

CRO and Marketing

- 45+ years of agriculture experience
- Led product & brand management, market development, sales management, and distribution & logistics
- Worked at Farmland Industries, CIBA Geigy-Syngenta, Regal Chemicals, ProGro Solutions, and founded two manufacturing and distribution companies



Erin Williams

CFO

- CFO of Omega Realty Group and CS Equities from 2016 - 2023
- Assisted Omega Realty Group in expanding their portfolio from ~150 to ~1750 properties
- Previously worked directly with the CFO of Revere Control Systems on all matters related to purchasing & inventory, financial reporting, and budgeting
- CPA, CMA


UNTREATED
STRONGSOIL™
BY CHONEX
28
26
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82
95
43
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PLUG AND PLAY

STARTUP PRESENTATION



TRUEALGAE

Truealgae is leveraging the biology that started 2 billion years ago.

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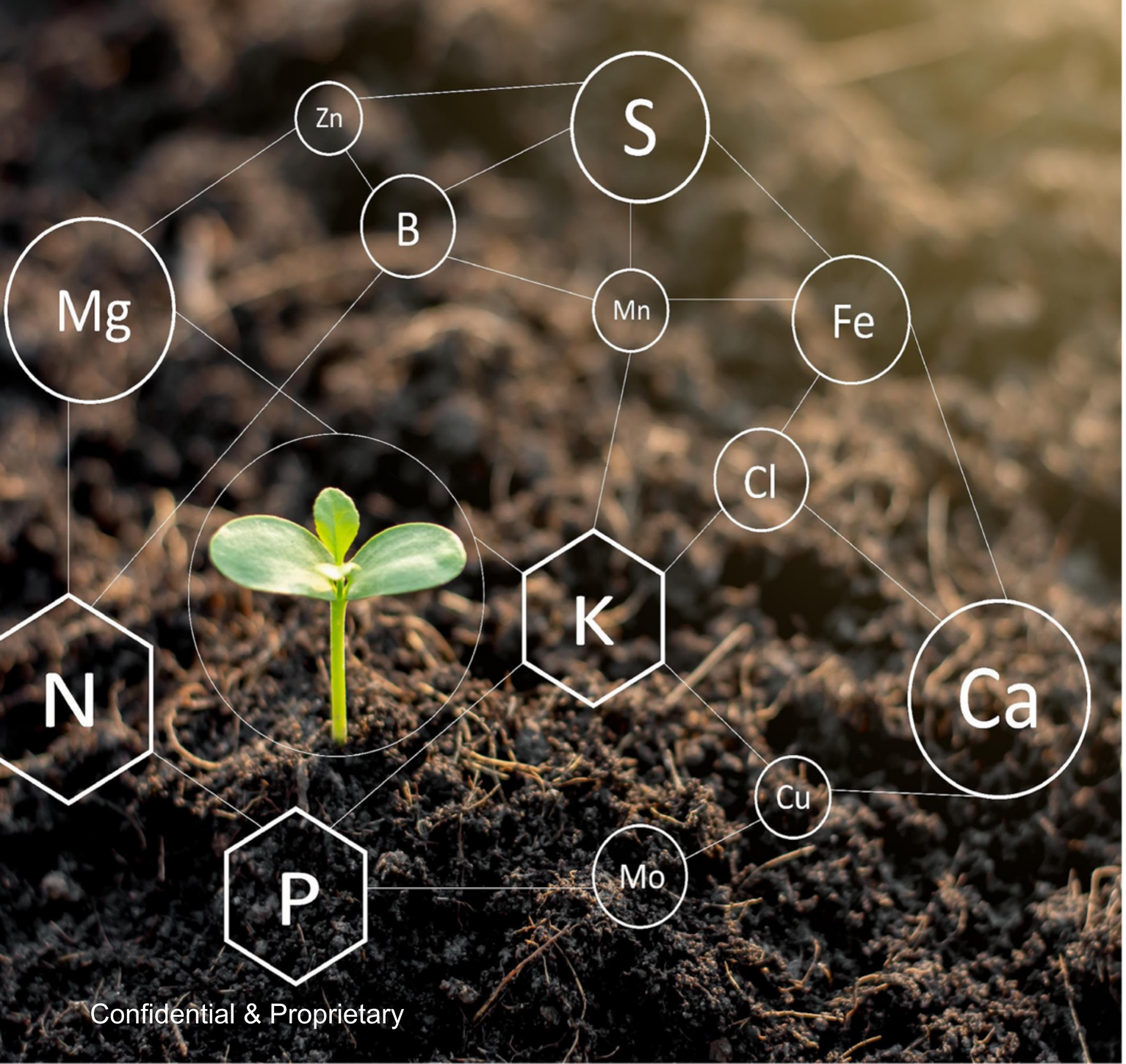

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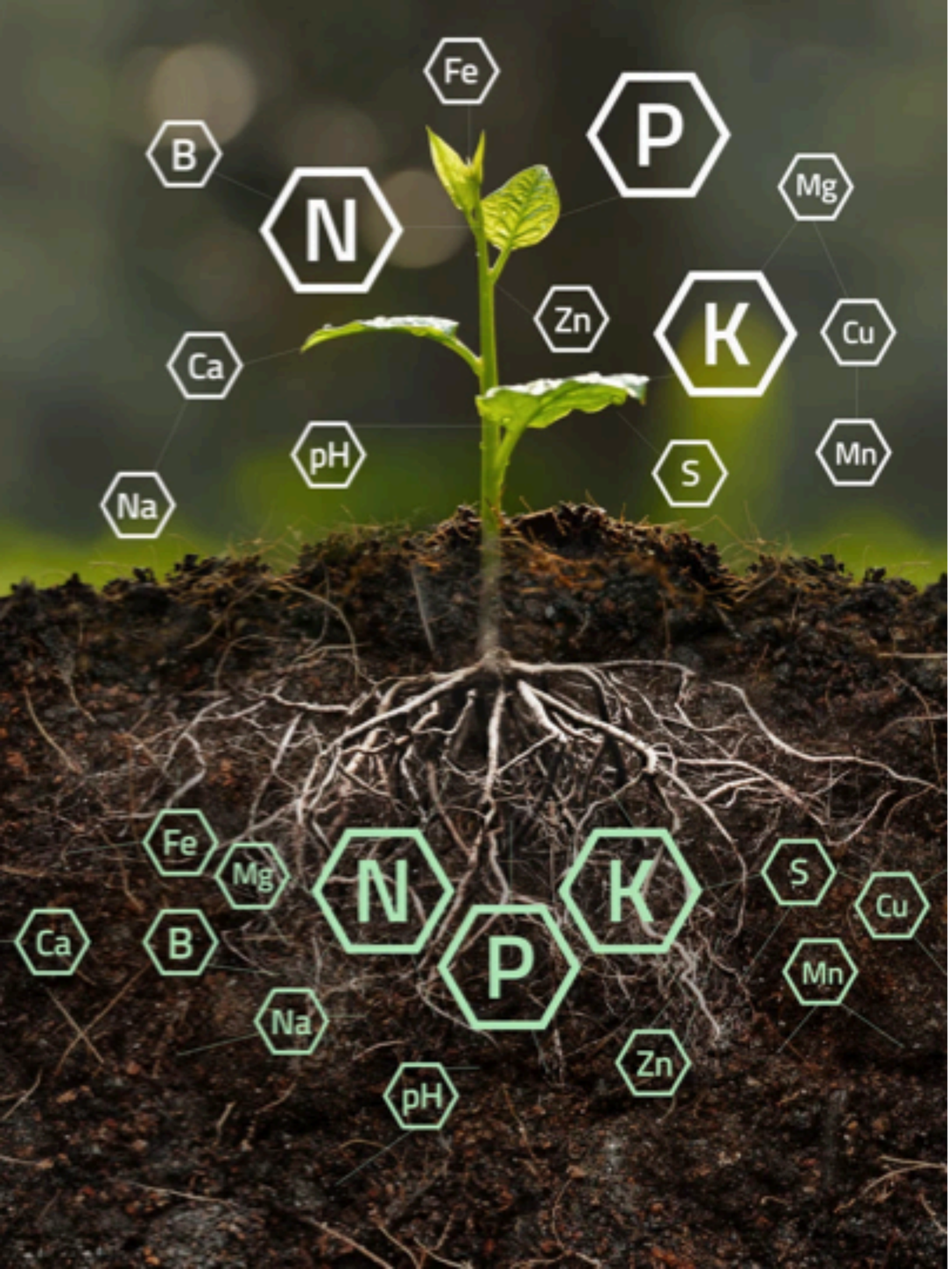
True Algae®

Pioneering Metabolites for Agriculture



Unlocking Nature's Potential

The Problem: Conventional agriculture continuously adds synthetic nutrients to soil, even though the nutrients are often already there but locked away. Conventional tillage practices damage soil microbe community.

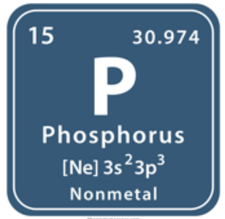
Our Solution: At TrueAlgae, we work with nature using the power of our metabolites to unlock these trapped nutrients, improving availability and uptake.







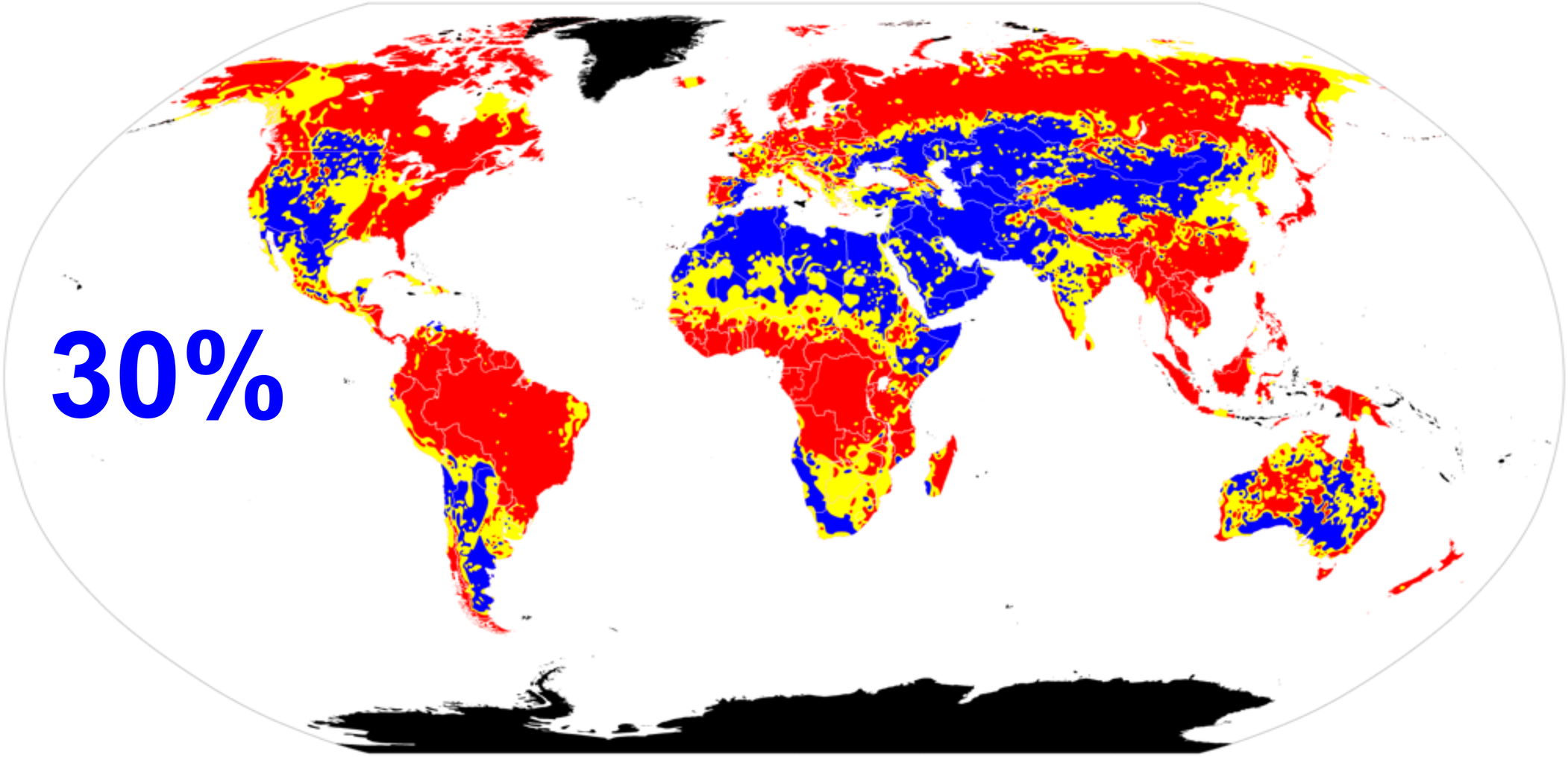
Phosphorus Deficiency



Iron Deficiency



IDC Prone Soils Around The World



Global variation in soil pH. **Red** = acidic soil. **Yellow** = neutral soil. **Blue** = alkaline soil. **Black** = no data.



Solution is

Healthier Soil

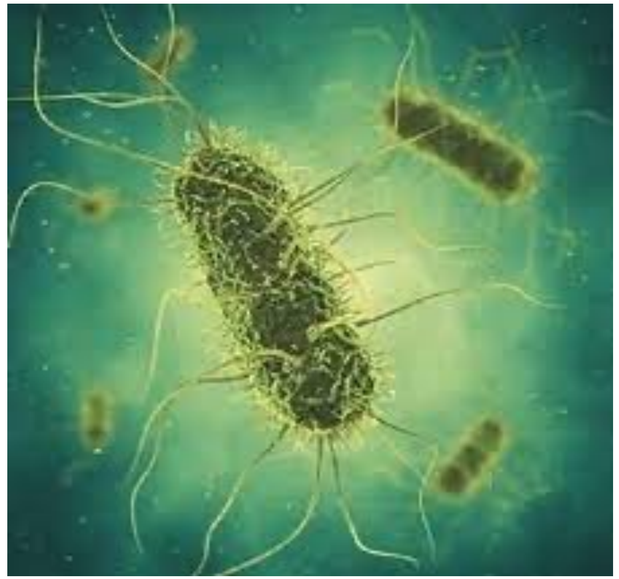
1 gram of soil has

10 billion Soil Microbes

Signaling Beneficial Soil Microbes to Work

Azospirillum

+200%



Natural Nitrogen Fixing Cycles

Mycorrhizae

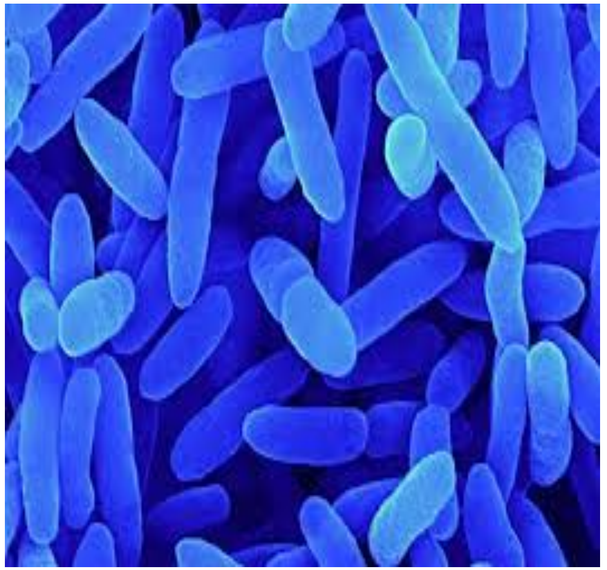
+100%



Phosphorus and Water Uptake

Pseudomonas fluorescens

+300%



Iron uptake via siderophores



We Make Metabolites to Solve Agriculture Challenges

**Using algae to produce a platform of metabolite mixtures,
tailored to specific needs in agriculture and beyond**

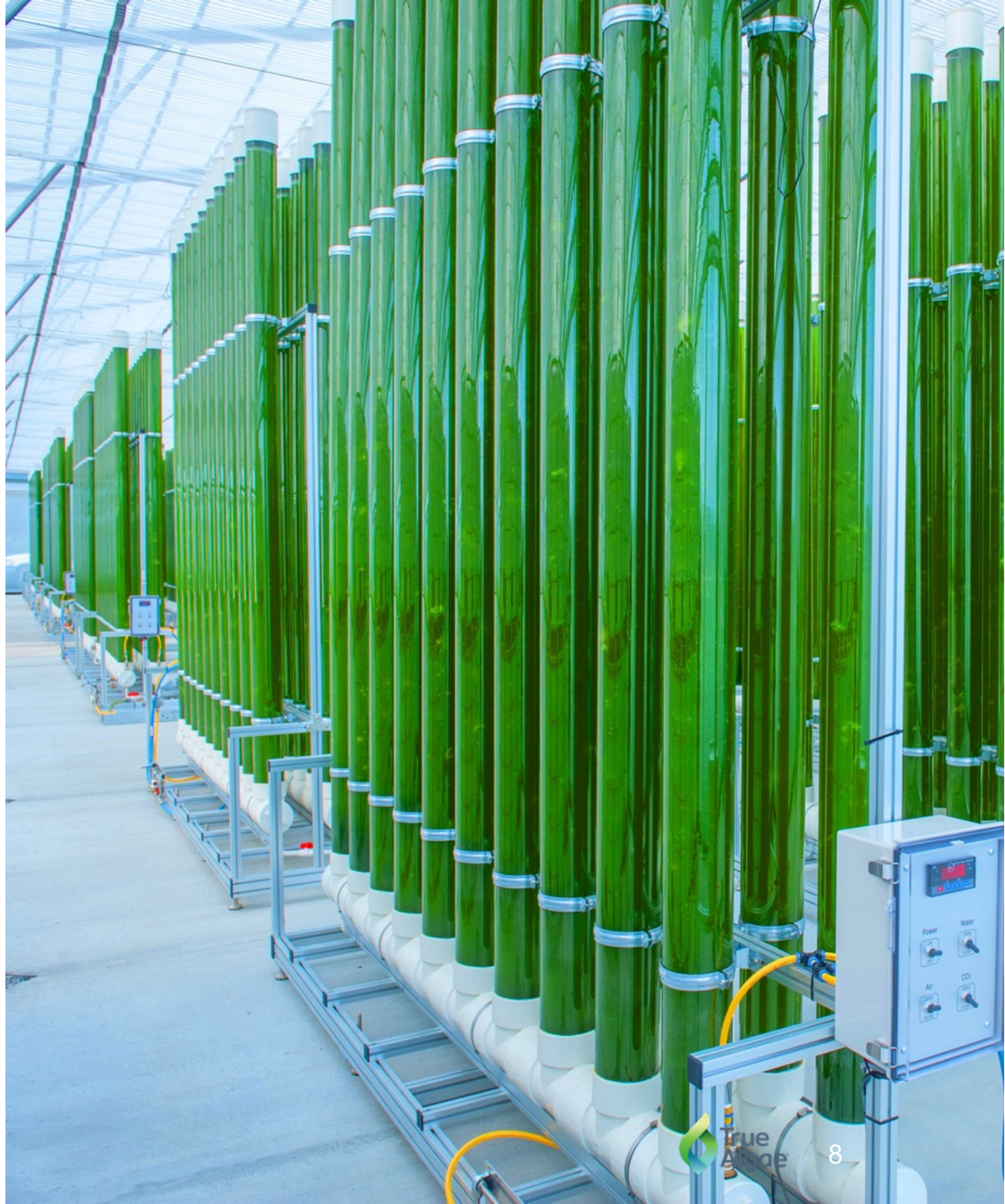
Our Technology

Differentiation

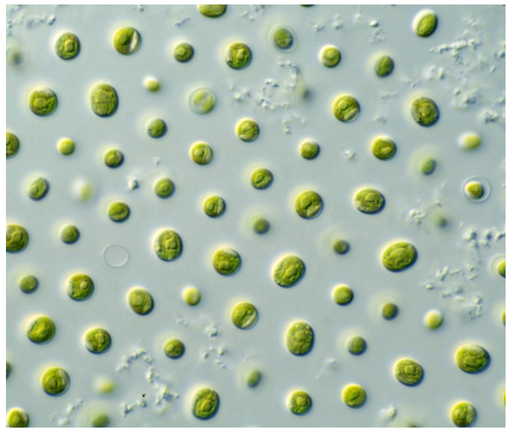
- Leveraging algae as a factory for metabolites
- Harvesting metabolite rich growth media
- Algae biomass is not the product

Production Technology

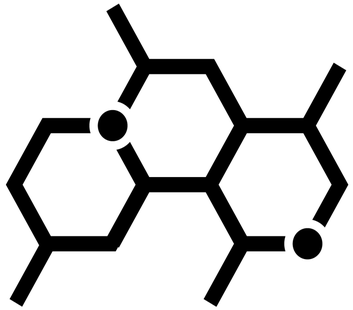
- **Innovative Approach**
  - Harnessing biological systems
- **Key Features**
  - Patented methodologies
  - Scalable operations
  - Low capital expenditure



What are Metabolites?

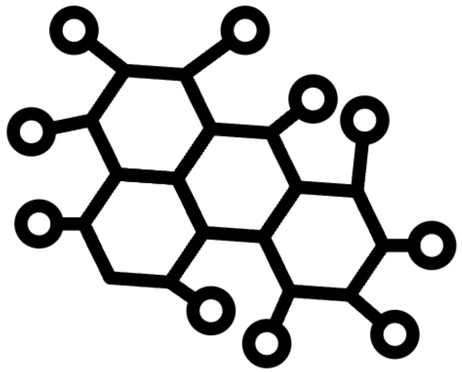


Microalgae

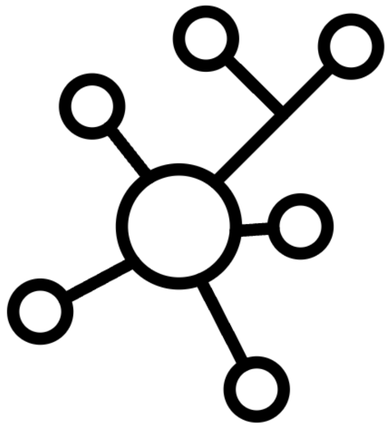


Octadecanoids

Metabolites are small **nano level natural** molecules created by every living thing, crucial for maintaining a healthy environment.

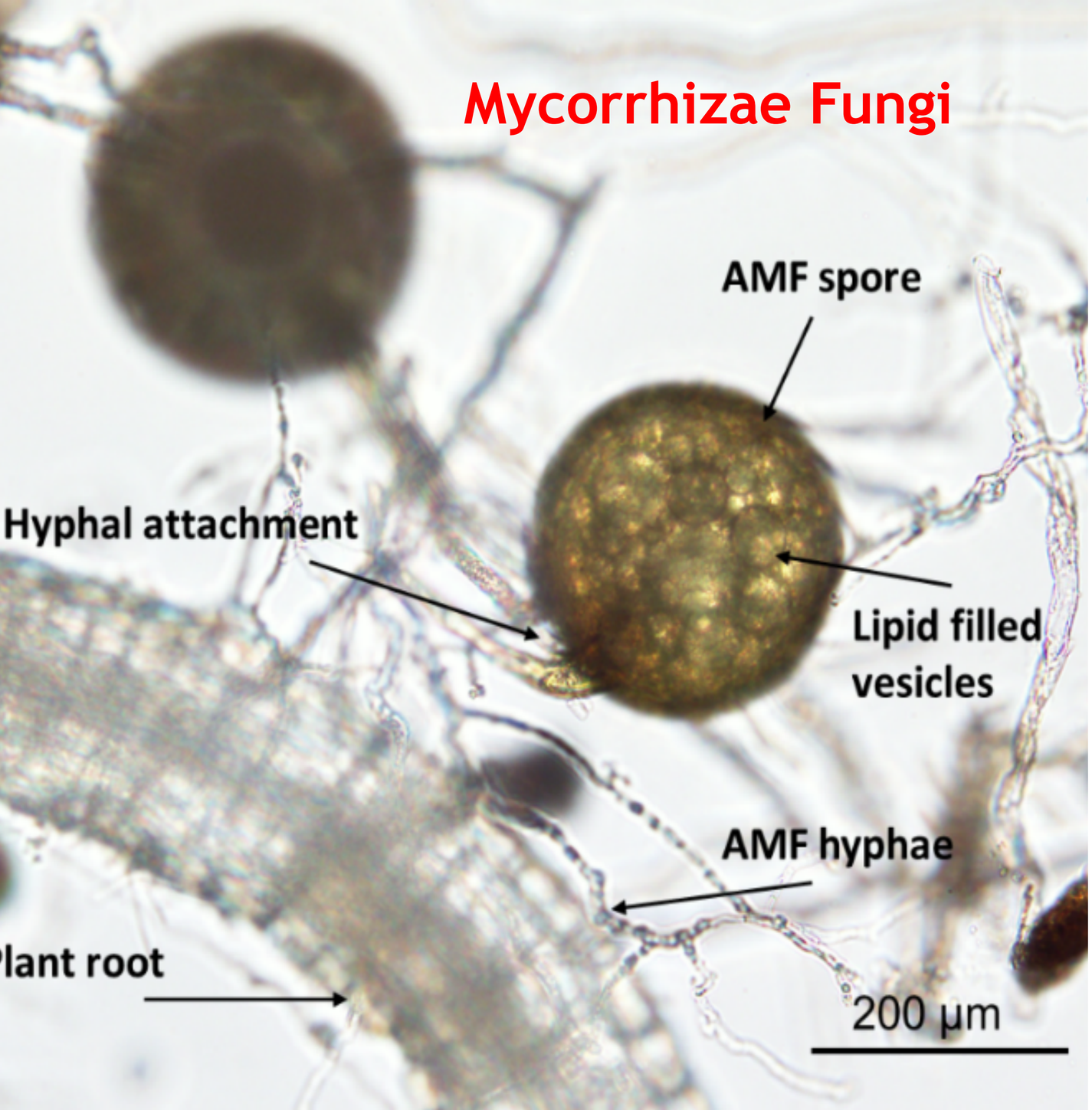


Small Peptides



Coumarins

Metabolite analysis discovered 9 small peptides, 4 eicosanoids, 6 octadecanoids, fatty acids, phenolic acids, and 3 coumarins.

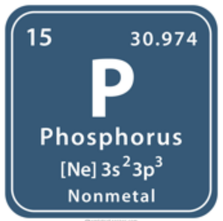


Impact on Microbes

Metabolites interact with the soil microbiome as a signaling tool between plant and soil microbes.

Microbes make required chemical compounds to help release key nutrients trapped in the soil for uptake by crops.

Nutrient Uptake by Crops



↑ 22%



↑ 24%



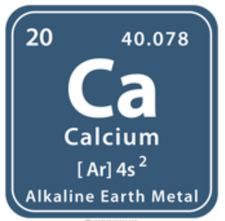
↑ 22%



↑ 17%



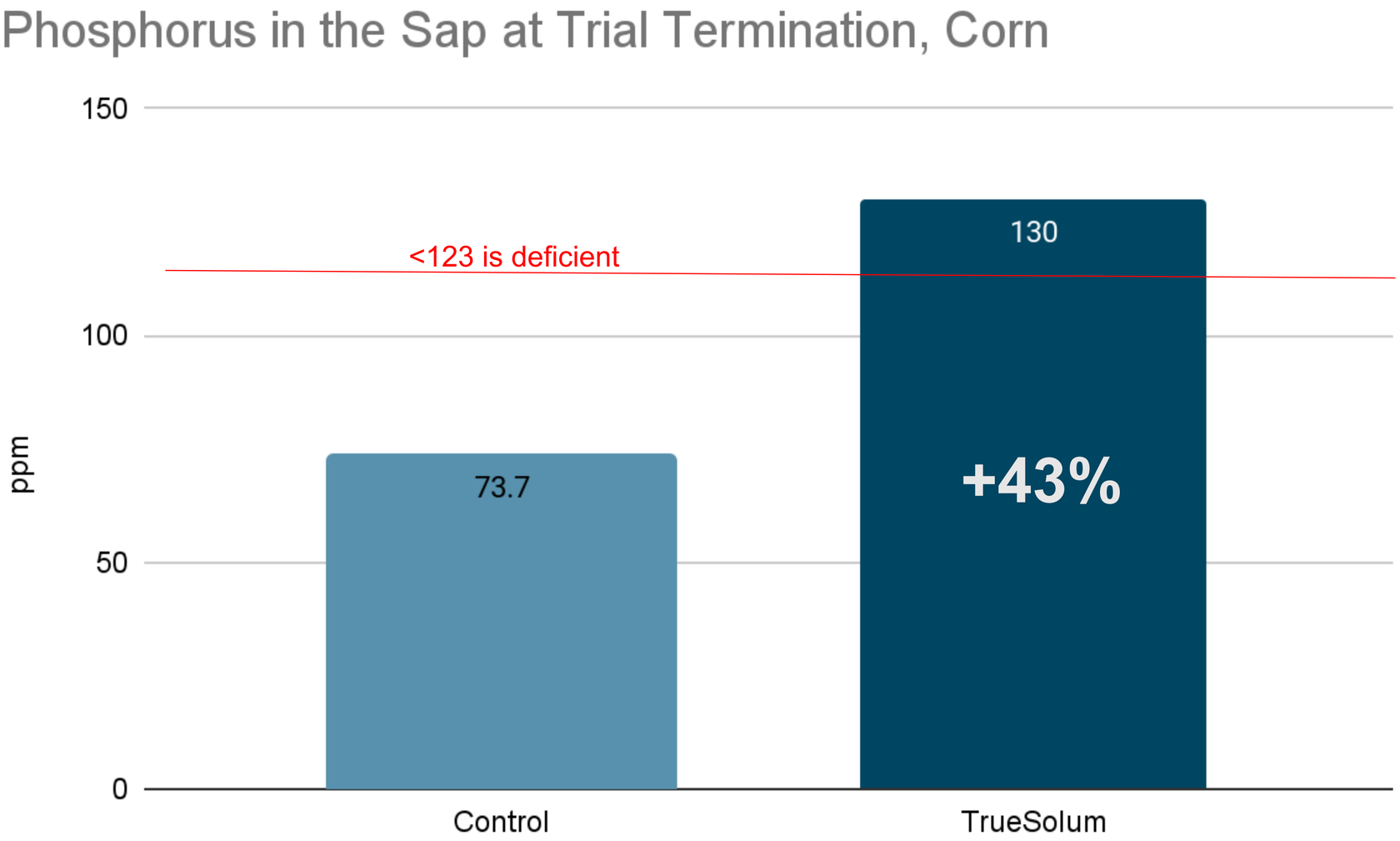
↑ 23%



↑ 22%

Effect of TrueSolum on Phosphorus Deficiency of Corn

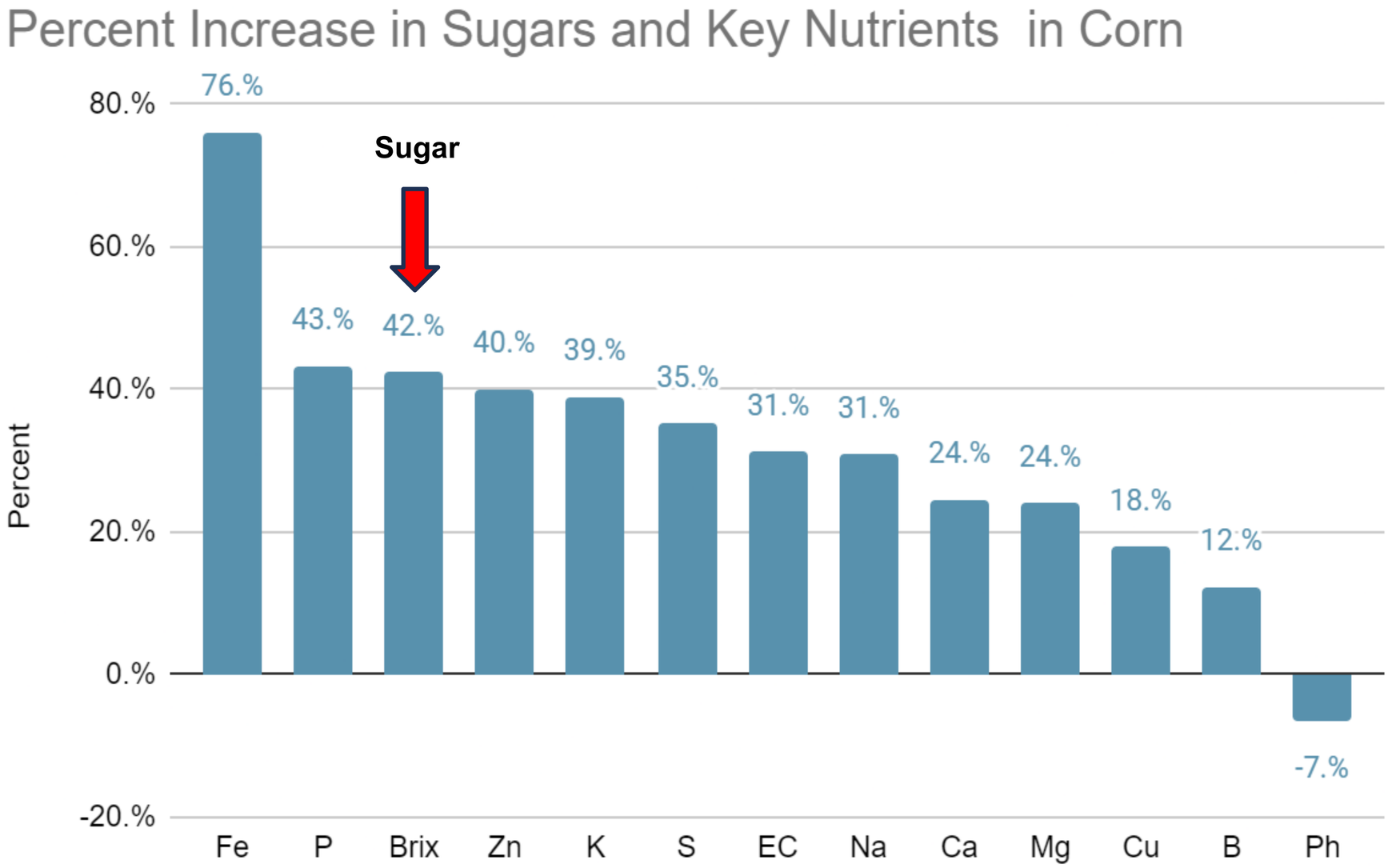
Melissa Nelson, Performance Crop Research, Great Bend, KS



At trial termination, the TrueSolum treated corn had 43% more phosphorus compared to the control. Note that this brought the TrueSolum treated corn up to within the adequate range while the control was deficient.

Effect of TrueSolum on Phosphorus Deficiency of Corn

Melissa Nelson, Performance Crop Research, Great Bend, KS



At trial termination, the TrueSolum treated corn had higher levels of other nutrients besides phosphorus (Fe,Zn, K, S, Ca, Mg, Cu, B) and increased sugars and EC as well.



Return on Investment

- TrueSolum has improved yield by 4% to 15% in corn across 3 trials in 2022

- Assuming 5% yield improvement
  - Cost to farmer: $4/acre
  - Price of corn: $5.50/bushel
  - Average yield in bushels: 172/acre
  - 5% = 8.6 additional bushels/acre
  - **Extra revenue = $47.30/acre**

866% ROI

New Rice Production in Japan

Significant reductions in methane gas







Methane Gas is **28 times more** potent than Co2.

Global Rice Production accounts for **1.5% of total Global Warming.**

Scientific Discoveries at TrueAlgae

Scientific Leadership

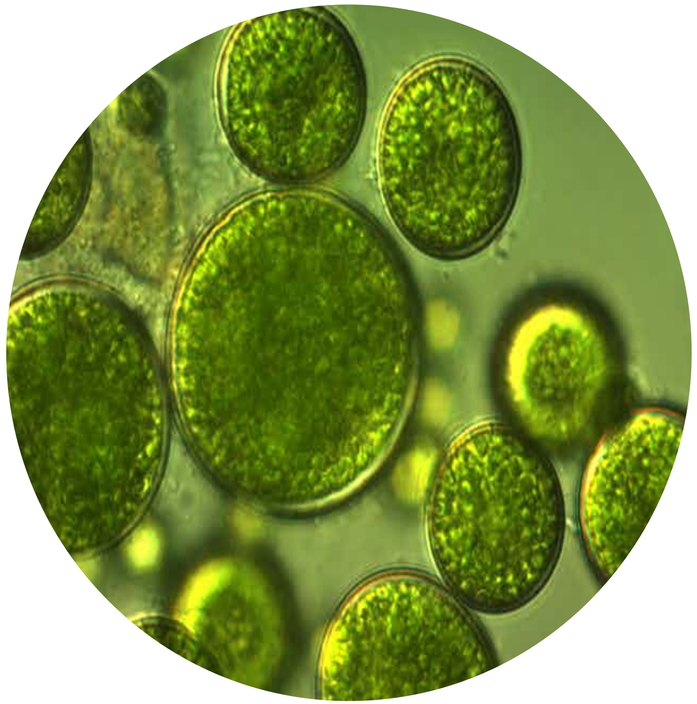
- Spearheading metabolite discovery in agriculture
- Focus on identifying the mode of action and then filing the appropriate patents

Major Findings

- Discovering key metabolites with research institutes
- Leveraging these discoveries to enhance agricultural solutions

Impact on TrueAlgae

- Enables the development of innovative metabolite-based products
- Contributes to the company's success by creating a metabolite platform to address agriculture challenges
- Provides the foundation for building a comprehensive and valuable IP portfolio



We Are Expanding Our IP Portfolio

Mode of Production patent
US Patent number: 10,941,373 B2. Date of patent: March 9, 2021
Patents in Australia, Brazil and Mexico

Method patent filing for cation and iron uptake in plants
International Application PCT/US22/42498. Filed 9/2/21 and amended 10/30/21
Filed for US National Application # 18/688,910: 3/4/24

Method patent filing for mix with mycorrhizal fungi
International Application PCT/US2021/64198. Filed 12/17/21
Filed for US National Application # 18/720,933: 6/17/24

Method patent filed for phosphorus uptake
US Provisional Application 63/693,812. Filed 9/12/24

Chicken broiler and layer claims to be filed shortly

Our Leadership

Proven Success in Growth Strategy



Angela Tsetsis

Chief Science and Commercial Officer

Professional Highlights

- Former senior executive at Martek Biosciences
- Led the commercial team that generated over $400 million in annual sales
- Played a key role in Martek's acquisition by DSM for $1.1 billion

Experience

- Over 30 years of management experience
- 20+ years in commercializing high-value products from algae
- Expertise in biotechnology, sales, and marketing
- Worked with multiple start-ups using microbial tech for health and wellness

B2C to B2B: Strategic Evolution for Scale



Proof of Concept

Farmers and Distributors

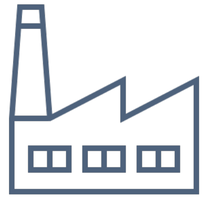
Proven success through direct trials with growers, showing yield increases.



3rd Party Research

Universities and Labs

Continuous research to develop the metabolite platform technology.



B2B Evolution

Ag Input Manufacturers

Introducing metabolite concept, trialing and co-developing products with corporate partners.



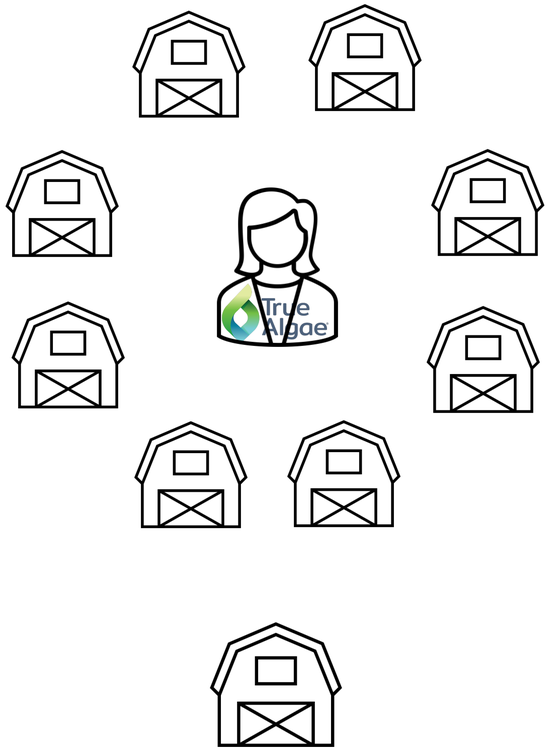
Partnerships

Ag Input Manufacturers

Scaling with B2B Partnerships for larger volume and faster market penetration.

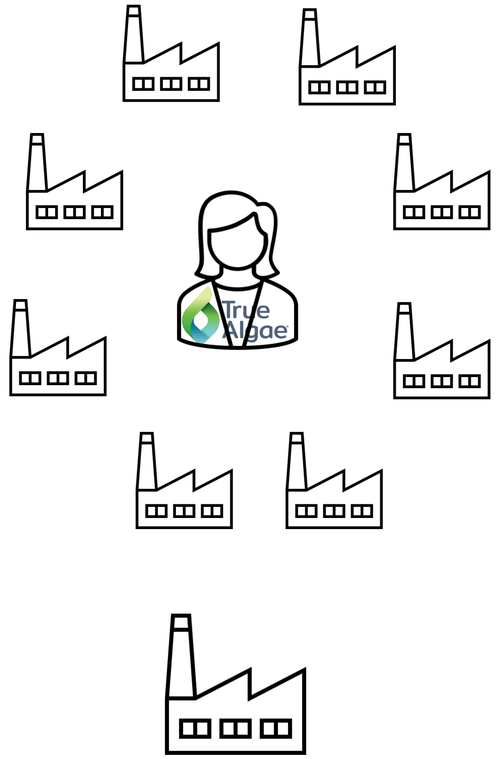
B2C to B2B: Why?

B2C



$5,000 k/year - $100 k/year

B2B

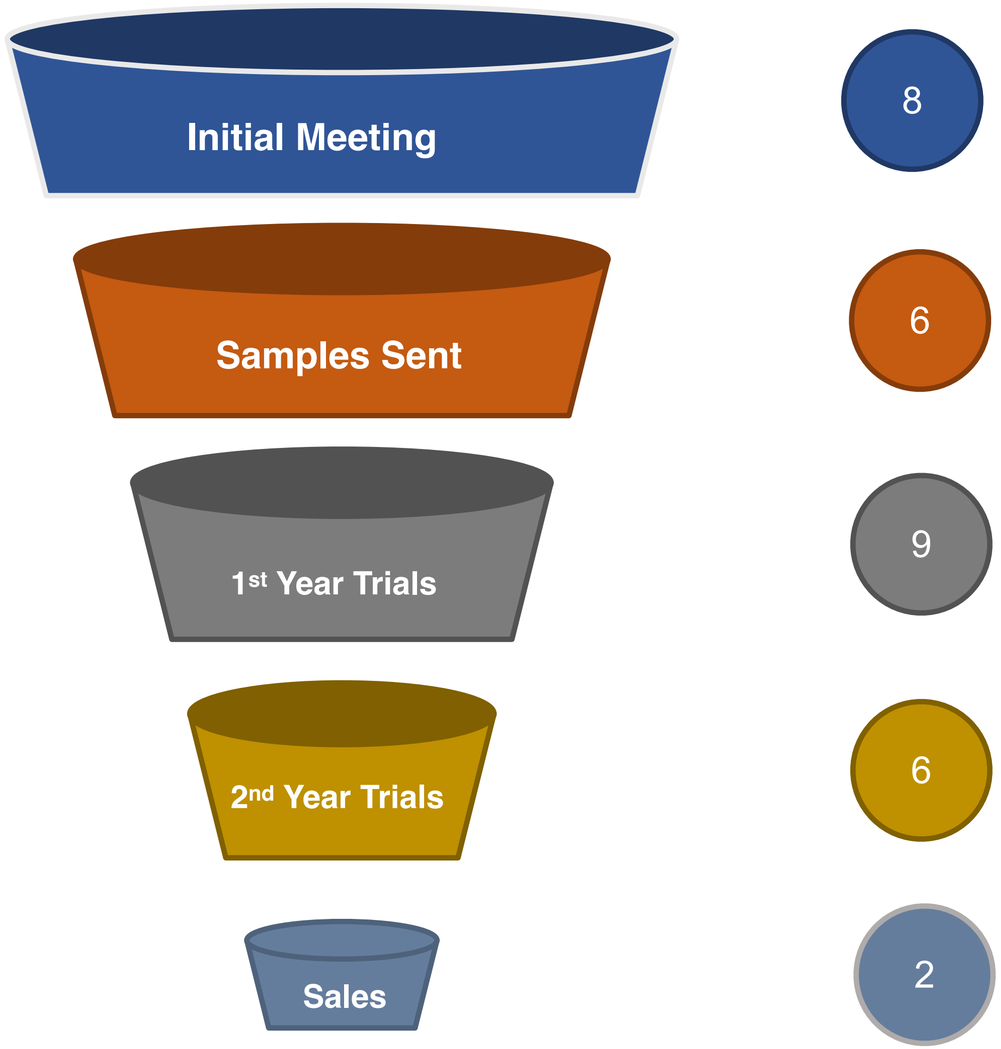


$250,000 k/year - $5 mi/year

B2B Progress

Over 30 companies currently engaged:

- 15 trialing partners
- 19 trials
- 13 different crops



* Number of companies in each stage of development

TrueAlgae Highlights after Batch 7

Novel Bioactive Discovery: Advance metabonomic analysis has proved how our metabolites enhance nutrient uptake by stimulating beneficial soil microbes via signaling.

Proven Metabolites: Demonstrated increased nutrient uptake across multiple crops.

Projected Growth (2025): Anticipating significant growth as B2B trials transition to a joint formulation studies & commercial agreements.

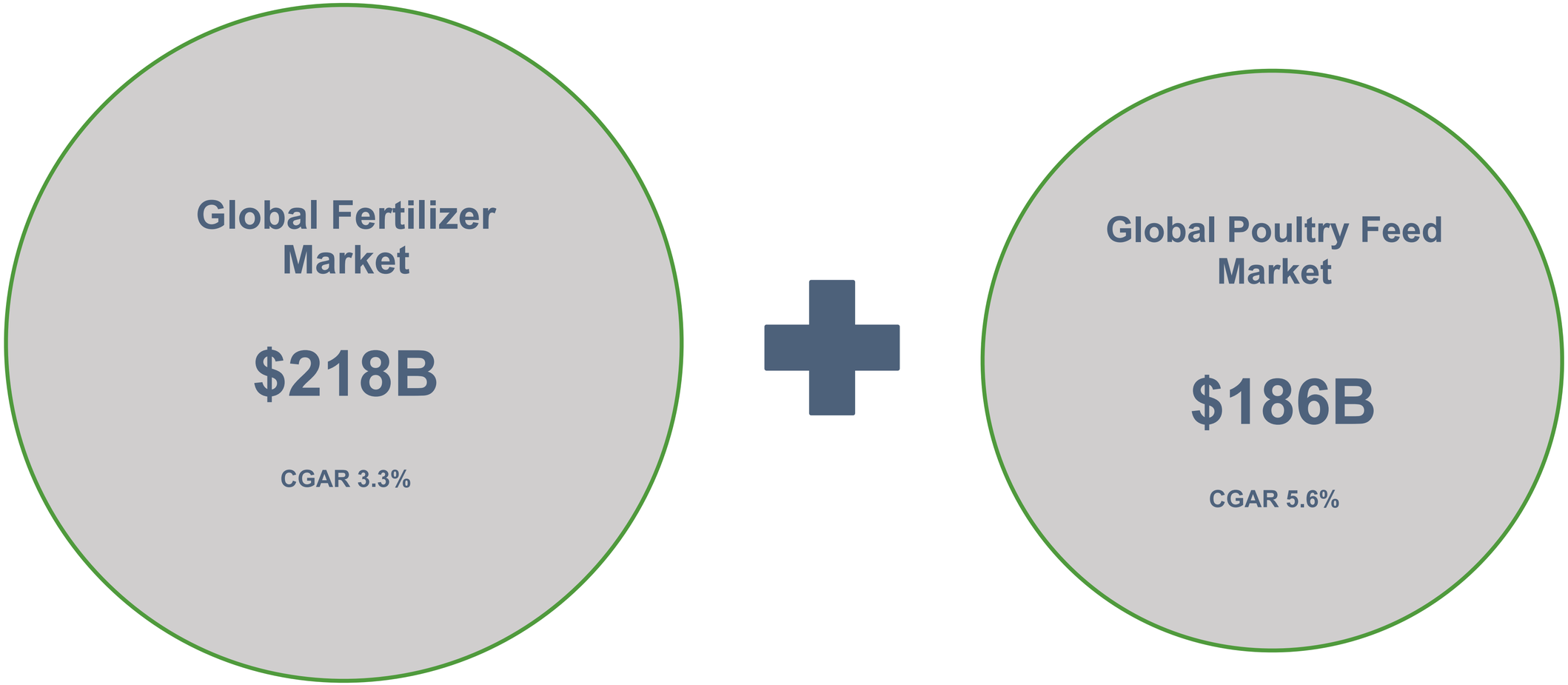
30+ Corporate Partners: Actively managing relationships and in various stages of trials and discussions, aligning with our B2B strategy.

50+ Trials: Completed and ongoing trials in the UK, Spain, Italy, and the US, validating the product's effectiveness.

License Agreements & LOIs: Secured agreements in Japan, Canada, and other key markets.

Distribution Agreement: Established retail distribution opportunities in the EU.

TAM – Around $400 Billion Today



Our team knows how to scale…



Nathaniel Jackson
Chief Executive Officer

IDB Inter-American Development Bank

NEXT IMPACT VENTURES



Angela Tsetsis
Chief Sciences Commercial Officer

MARTEK life enriched.™

EVOLVA



Taka Kamezawa
Chief Relationship Officer

IFC

mfi

…and so do our

investors and lead angels

Investors

VIPC | VIRGINIA INNOVATION PARTNERSHIP CORPORATION
Connecting Innovators with Opportunity

Caygan Capital

IMPACTASSETS
INVEST WITH MEANING

soilworks

propel(x)

Lead Angels

CRIMSON INVESTMENT FUND

HBS Angels
HARVARD | BUSINESS | SCHOOL

Seth Goldman

Scientific Advisory Board



Kimberly Wagner

PhD

TBGD Partners

Flagship Pioneering



Sara Faivre

PhD

FARMER MAC
Accelerating Rural Opportunities

VIAGEN BIOTECH



Pam Marrone

PhD

Marrone Bio Innovations

AgraQuest
better food. better world.™



Robin Ross

MSc

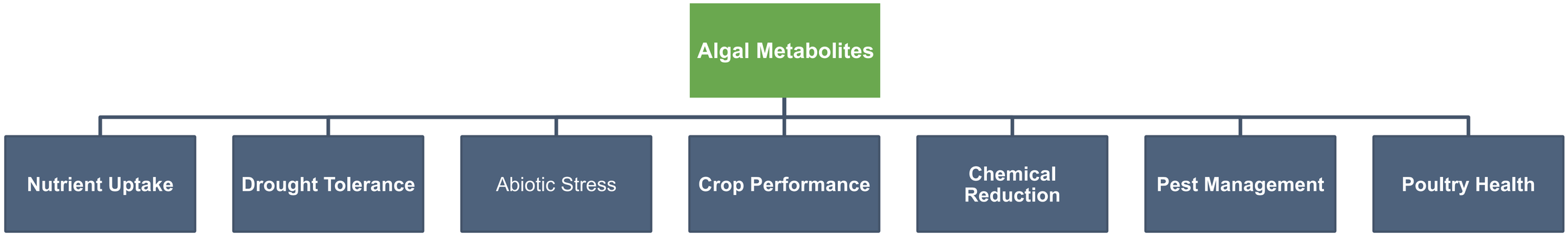
AGNEXUS CONSULTING

Acadian Plant Health

Terms for
Seed Extension

- Up to $2.5M raise
- $12M pre-money valuation
- Key Investor – Caygan Capital, VIPC
- Raised $1.7M, additional $2M interest
- Use of funds: More R&D, patent filings, key hires
- Target closure by the end of 2024.

Multiple Products ➡ Multiple Solutions



Thank you!

Taka Kamezawa
Co-Founder

tkamezawa@truealgae.com

240-477-5223

PLUG AND PLAY

STARTUP PRESENTATION

ContinuumAg

CONTINUUM AG

Carbon Intensity MMRV from the farm, up!

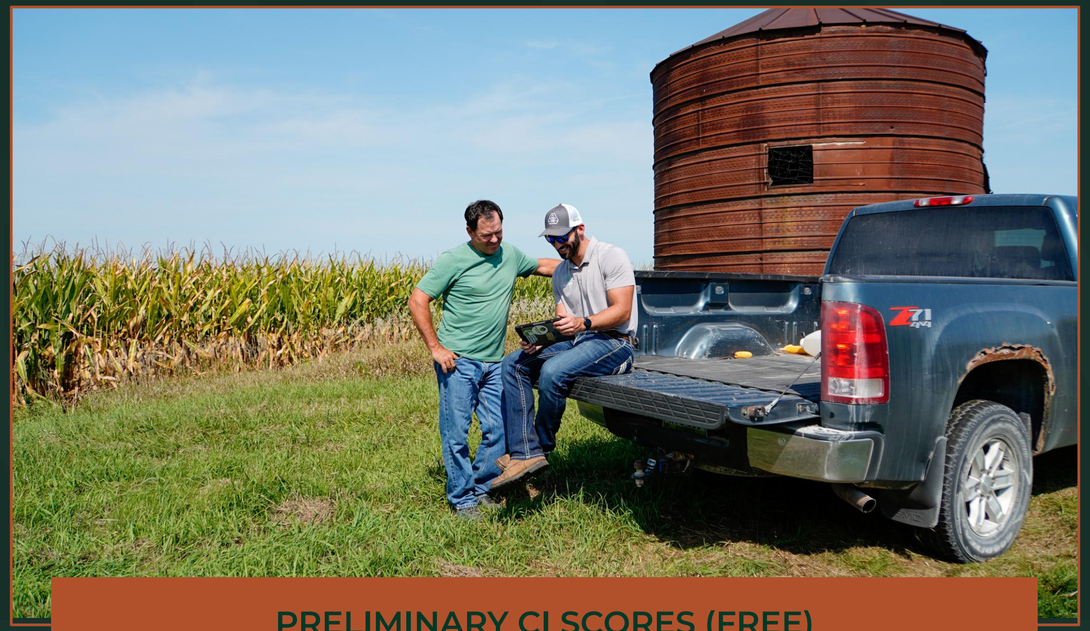
#PNPTCSiliconValley

Join us at **pnptc.com**


ContinuumAg
SERIES A BRIDGE:
MARKETPLACE, SCALE,
ACCELERATION

CURRENT BUSINESS

SOFTWARE COMPANY ENABLING FARMERS WITH TOOLS TO MONETIZE SOIL HEALTH



PRELIMINARY CI SCORES (FREE)

340M bushels scored
representing >1.7M acres



CI CERTIFICATION - MMRV Program ($7/AC)

300,000 acres enrolled $1.4M
ARR

INFLATION REDUCTION ACT: SECTION 45Z

2022

IRA PASSES

Provision for Clean Fuel (45Z) tax credit and identifies GREET model as Scope 3 tool for measurement

2023 — 2024

CONTINUUM WENT TO WORK

Integrated GREET into TopSoil, scored farmer network, created awareness, built network of partners

2025

MONETIZE TAX CREDITS

Biofuel producers monetize credits for fuel produced on or after January 1, 2025

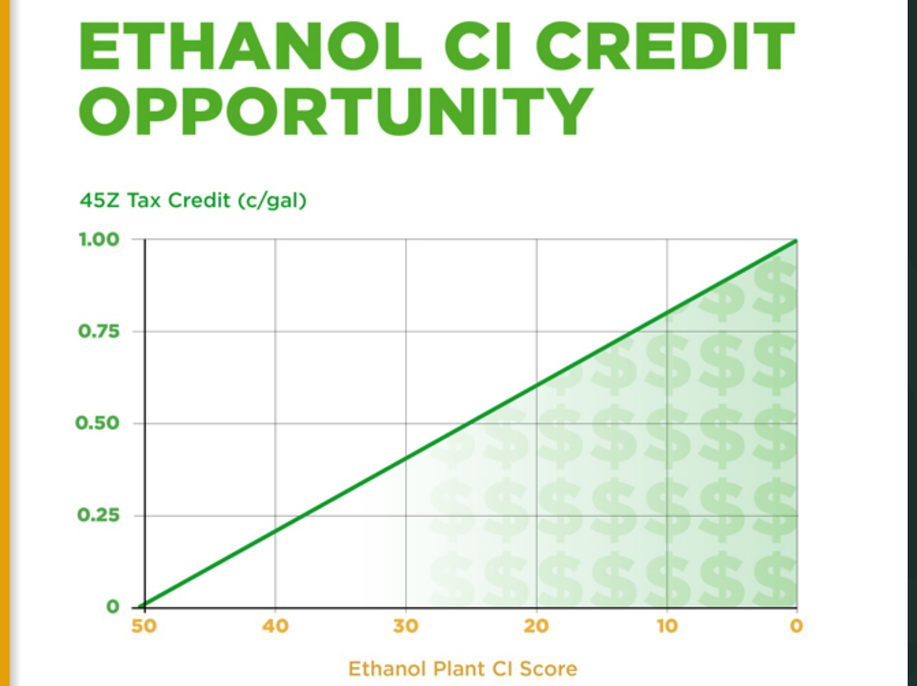
***SECTION 45Z -** Inflation Reduction Act tax credit providing an incentive for domestic clean transportation fuels

45Z REWARDS LOW CI FEEDSTOCK PURCHASES

ETHANOL PLANT OPPORTUNITY: $0.02/CI REDUCTION/GAL

CARBON INTENSITY REDUCTION OPTIONS

- CO_2 Pipeline: -30 CI
- Energy Efficiencies: -10CI
- On-Farm: > -40 CI Potential

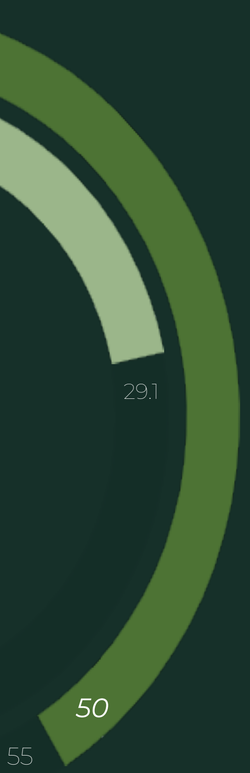


Iowa Ethanol Plant CI

Corn's Share of that CI

On-Farm Ways to Reduce Corn CI:

- Reduced Inputs
- Cover Crops
- Manure
- Tillage
- Yield



Access to 45Z Tax Credits starts at CI<50

*Feedstock CI - The CI Score associated with the production of the crops used in biofuel production

CI CERTIFICATION

OUR CUSTOMER JOURNEY CREATING AN EQUITABLE SHARE FOR FARMERS

SIGN-UP

Complete your free farm profile at TopSoil.ag

VIEW CI SCORE

See the value of your CI Score

CI CERTIFICATION

Enroll in CI verification program

ONBOARDING

Add fields and data to TopSoil account

DOCUMENT

Document activities and upload evidence

ATTEST BY SIGNING

Validate info and submit for verification

YOU'RE CERTIFIED

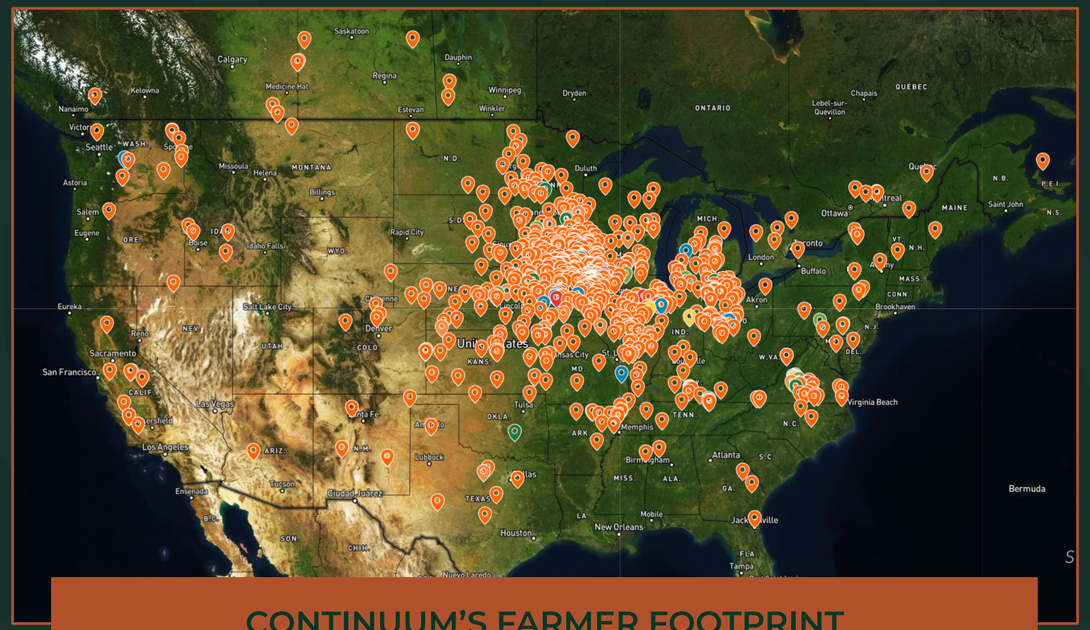
Our 3rd party auditor reviews and approves

Sell on the Marketplace

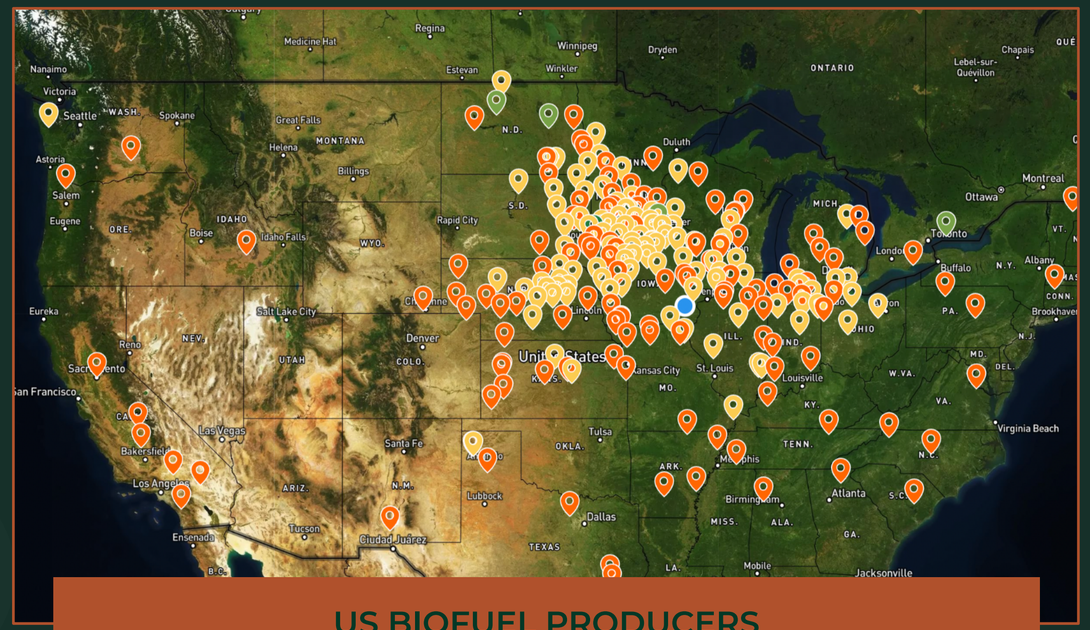
Sell your CI Certificates & collect premiums

PROBLEM

FARM TO FUEL DISCONNECT



CONTINUUM'S FARMER FOOTPRINT



US BIOFUEL PRODUCERS

Enrolled farmers will get CI Certificates, but there is no system to sell the certificates to biofuel producers participating in 45Z tax credits

SOLUTION

CREATE THE MARKETPLACE TO FACILITATE THE TRANSACTIONS

HYPOTHETICAL SCENARIO:



Farmer mints 100,000 CI Certificates

Batch of 15,000 CI Certificates sold

Batch of 10,000 CI Certificates sold



Biofuel manufacturer A CI Bid = **$0.026/pt**



Grain elevator CI Bid = **$0.023/pt**



Batch of 50,000 CI Certificates sold

Biofuel manufacturer B CI Bid = **$0.028/pt**

VALUE PROPOSITIONS:

Price discovery

◆

Transparency / traceability

◆

Risk / fraud avoidance

OPPORTUNITY

45Z & BEYOND



$5.2B
TAM

Global corn total
48B bushels

$583M
SAM

US corn to ethanol
5.4B bushels

$340M
SOM

Current pilot projects
3.06B bushels

*1/3rd of US Corn sold to biofuels annually. Current projects impact 57% of market (109 of 192 US ethanol producers.

TECHNOLOGY



CURRENT TECHNOLOGY

MVP is already built using AirTable but a “sales desk” is needed to facilitate trades



FUTURE TECHNOLOGY

Standalone software with blockchain readiness

SERIES A BRIDGE

SEEKING LEAD & PARTICIPANTS

SEPTEMBER

Launch MVP Marketplace

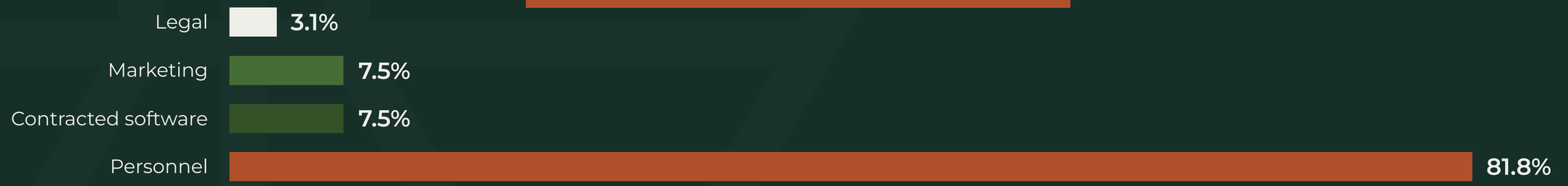
OCTOBER – MARCH

Software: 4 ◆ Finance / RevOps: 2 ◆ Sales: 6 ◆ Marketing: 2 ◆ Operations: 8 ◆ Regulatory, legal & policy

FEBRUARY

Facilitate sale of first verified bushels

USE OF FUNDS: $1.5M RAISE





THANK YOU!

CONTACT:

MITCHELL HORA - FOUNDER/CEO

mitchell@continuum.ag

319-461-9056

continuum.ag

PLUG AND PLAY

STARTUP PRESENTATION



WINICH FARMS

Connecting farmers to markets with AI-driven credit scores.

#PNPTCSiliconValley

Join us at **pnptc.com**

WINICH FARMS

Commerce Infrastructure & Embedded Finance for African Informal Retailers & Processors



Challenges



Lack of Inclusion

Lack of financial inclusion for **informal actors** hinders productivity

Middlemen

Middlemen between farmers, processers & retailers in informal markets **reduce profits**

Traceability

Lack of tracking & traceability from **Farmer to Offtakers**



Pain points in informal value chains

Solutions

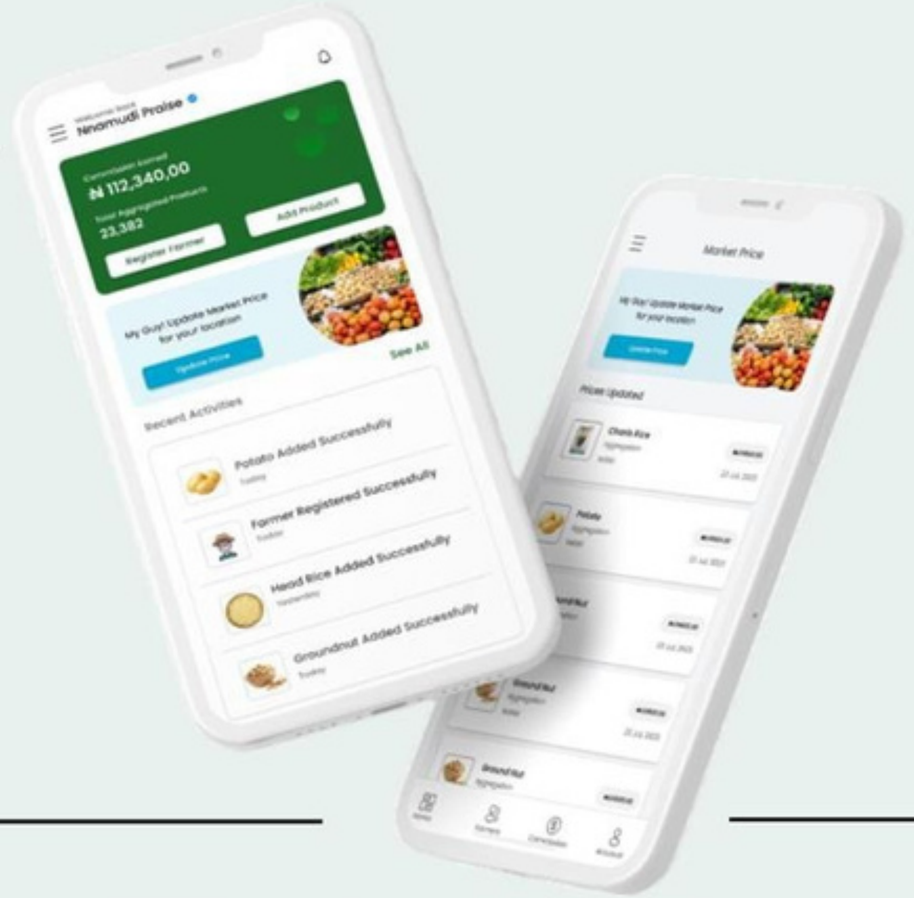
Farmer

Take produce to nearest collection center

Offtakers

(In) formal retailer, processers can order form one source

Services: Organic cultivation support, insurance, credit financing, and debit card
5-10% Fee



Winich Agents

Upload produce data to app

Truck Drivers

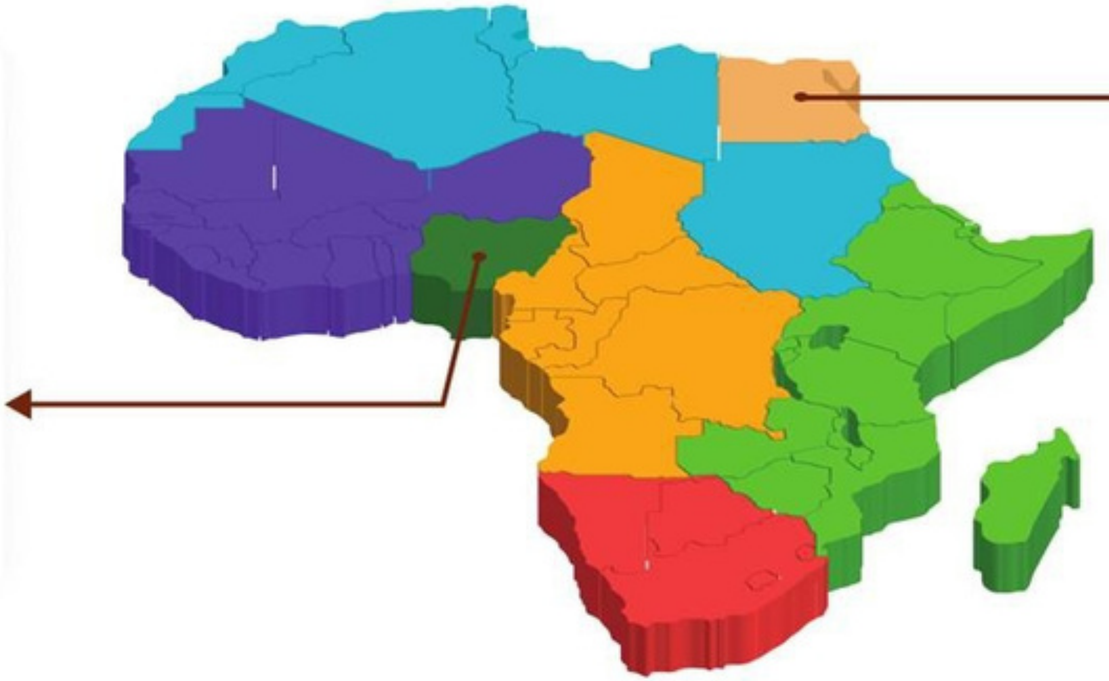
Registered on App, booked for delivery

Winich app integrates informal actors into the value chain:
It also enables access to services

Opportunity

MARKET IN NIGERIA

- ✓ **35+Million** Small Holder Farmers
- ✓ **$17+ Billion** Generating over every cycle
- ✓ **60%** Is Driven by Informal Processors, Retailers





Most platforms target formal retailers/processors/offtakers because it's more organized and straightforward, there is an untapped informal market Winich is targeting.

Revenue Model

Farmer Logistics - Offtakers

1-5%

20%

Farmer - Winich
(Revenue shared with Sterling Bank)

Services
Insurance, credit, organic cultivation support

Unit Economics

- For every $10 commission Winich earns
- Agents $3-4 earns
- Gross Margin $6-7

5-10%

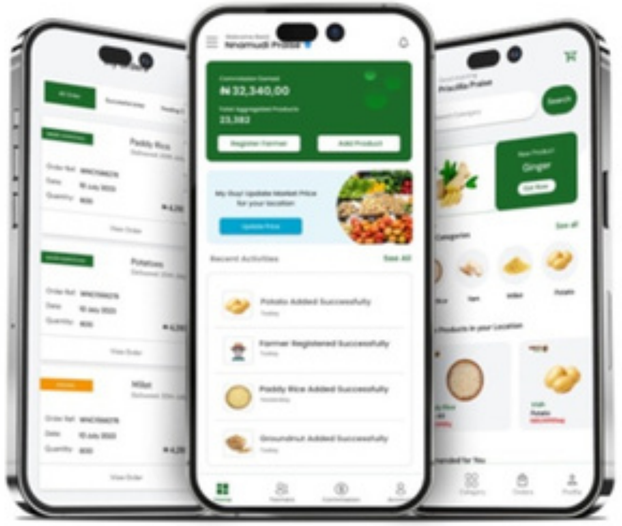
Market Connections

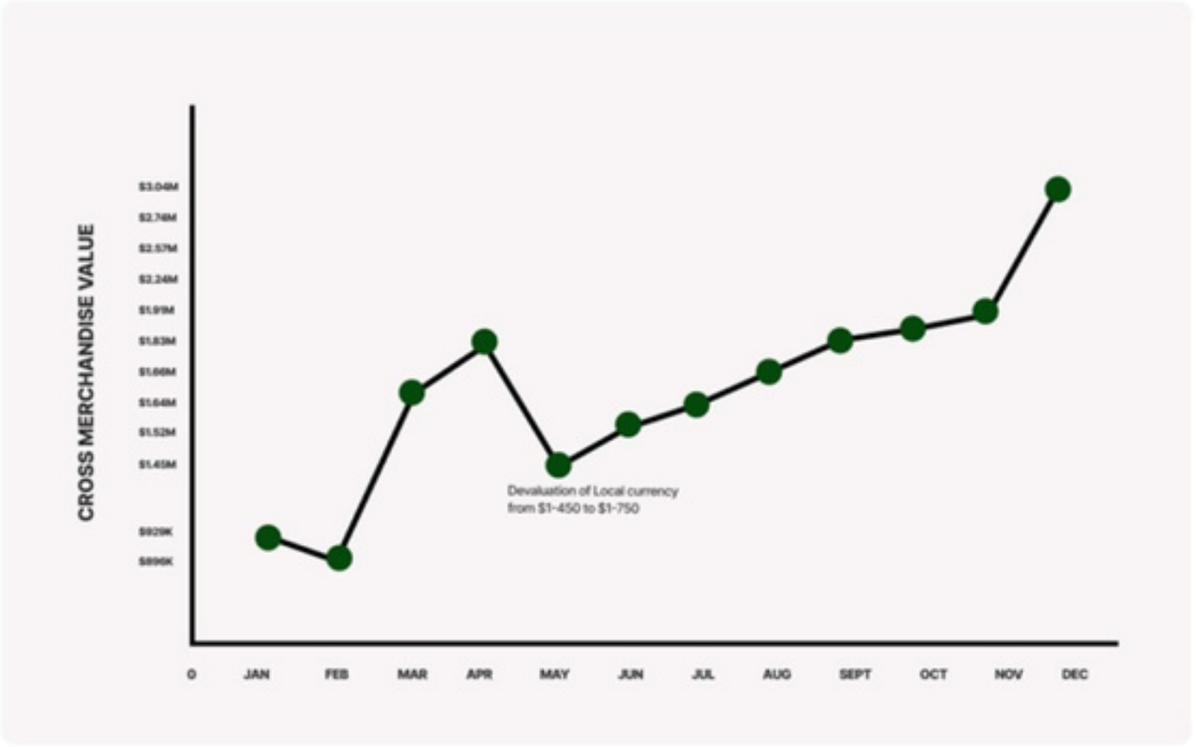


Partnership with Sterling Bank to provide debit cards to 100K farmers; debit card data on farmer's income and spending to facilitate credit assessments hence access to financing. Credit scoring facilitated by Winich algorithm.

We have three major sources of revenue

Traction & Growth





Revenue
$1.98M

Month-on-Month Growth on Revenue
>19%

Merchants/Offtakers on Winich Platforms
>8500+

Users on Winich Platforms
>150,000+

Traction in the last twelve months ($30M Gross Merchandise Value)

Founding Team



Riches Attai

Co-founder & CEO

- 2x Founder in food supply chain
- 7+ Years of experience across food supply chain
- Former Accountant Flexo International
- Bsc. Economics & Statistics



Winner Attai

Co-Founder & COO

- 6+ years in Fast Moving Consumer Goods
- Former Fleet Manager Jango Logistics



Chichebem Jibunoh

C0-Founder & CTO

- 11+ years in Software Development
- Former Senior software engineer Para Systems
- Lead Software Engineer Cashingames
- M.S.C Computer Science

Board Members



Tamer El-Raghy
Managing Director, Acumen
Resilient Agriculture Fund



Prof. Ndubuisi Ekekwe
Chairman Tekedia
Capital



Aya Zaghnin
General Partner, Startup
Wise Guys

Funding

$3.8M FUNDS RAISED

54COLLECTIVE

EXPERT DOJO

ORANGE CORNERS

acasia VENTURES

Marula Square

SAHEL CAPITAL AGRIBUSINESS MANAGERS LIMITED

PLUGANDPLAY

CRAF

TEKEDIA

Katapult

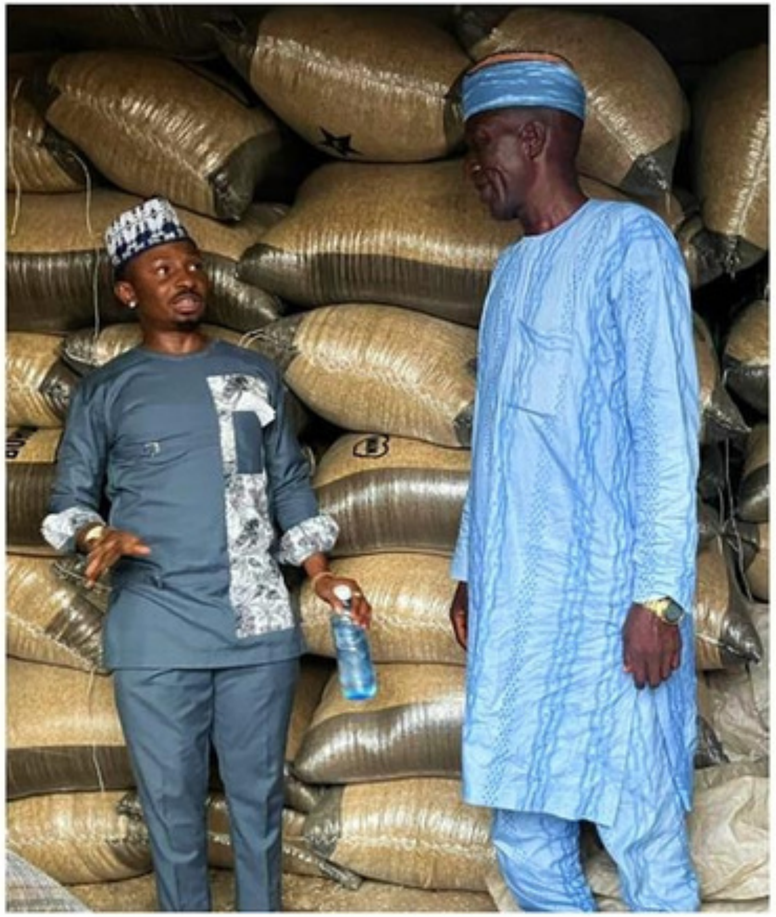
ARAF Acumen Resilient Agriculture Fund

FOR PROJECTED GROWTH OF $120 GMV

- Geographical expansion to East Africa (**Kenya** & **Tanzania**)
- Secure Microfinance License
- BNPL
- Scaling 4000 Agent centers to 10,000+ Agent centers
- Technological Enhancement

Partners (Series A) Raising **15M** will be listed soon

Impact



Our Impact

- **Organic Training, Certifications:**
  Winich organic cultivation extension services earning farmers premium prices for produce
- **40% Less Post-Harvest Loss:**
  Efficient connectivity along value chain
- **GHG Reduction:**
  Collection centers close to farmers algorithm-based trip aggregation and route planning
- **30% Increased Production:**
  Jobs created for agents and drivers access to financing for farmers and offtakers





Thank You

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PLUG AND PLAY

SV SUMMIT



Investment Updates

Mark McAllister

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Plug and Play Tech Center

#PNPTCSiliconValley

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AGTECH PORTFOLIO 2019-2024

19 Portfolio Companies

32% Hard Tech

Pre-Seed to Series A Investment Stages

Global (except China & Russia) Regional Focus

Investment Categories

DIGITAL SOLUTIONS 31%

WINICH FARMS

agrellus

bext 360

AgVend

SUSTAINABILITY 21%

ammgbia

UbiQD Ubiquitous Quantum Dots

ucrop.it

Sylvera

IOT & SENSING 21%

TELESENSE

BeeHero Pollinate & Prosper

MERTANI

BIOTECHNOLOGY 11%

BOOST BIOMES

BIOFEYN

CEA 5%

BABYLON MICRO-FARMS

AGRI-FINTECH 11%

FINRES

agryo

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AG/AH PORTFOLIO UPDATES (H1 2022 - H1 2024)

AgVend	Mar 2022 - Raised a $14M Series A for platform distribution
TELESENSE	Sept 2022 - Acquired by UPL's DECCO division to be combined with their OpenAG® Network
BeeHero	Dec 2022 - Raised a $42M Series B to accelerate growth of their Precision Pollination Platform
Sylvera	July 2023 - Raised a $57M Series B for US Expansion
AgVend	July 2023 - Facilitated $1B in product sales with $350M in digital payment processing on the platform
BeeHero	Mar 2024 - America's Top Greentech Companies 2024: Top 50
AgVend	July 2024 - AgVend unveils 'Goose': the first AI Co-Pilot built for Ag retail

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New Investments

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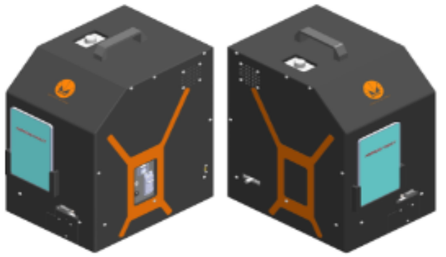
LATEST INVESTMENT Q2 2024

MAPANA

Investment Details

Round: Seed

Valuation: Capped SAFE



Company Overview

Mapana has created a **spectroscopy device** to sample the **leaf tissue** of crops. The device is portable and can be used in field. Utilizing **machine learning model** paired with a spectroscopy device, Mapana can provide a lab accurate, in field solution for determining plant health by analyzing the macro and micro elements in a plant's leaves. The device consists of a sample prep dryer, a pelletizer, a Laser-Induced Breakdown (LIBS) spectrometer which analyzes the pellet produced and internet connectivity sending testing data to the cloud for final analysis.

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AGTECH PANEL: THE STATE OF GLOBAL AG AND COMPETITIVE MARKETS



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