

Helping farmers increase crop yield and revenue

PITCH VIDEO **INVESTOR PANEL**



groguru.com San Diego CA    Software Food Technology Clean Tech Agriculture

LEAD INVESTOR



Ian James BUDDERY Chair of Cordel PLC and Critical Arc Pty Ltd.

I'm an investor in GroGuru because I believe in the combination of the team, the technology and the mission. Food and water security will continue to be key investment themes for decades to come. GroGuru helps farmers to be more efficient and better manage the environment. The management team are commercially focused, seasoned at execution and have both business and technology acumen. This is a company which does social good and will make a great return for investors.

Invested \$25,000 this round & \$75,000 previously

Highlights

- 1 🕒 Payback period for farmers is less than one growing season.
- 2 🚜 Patented technology increases crop yield by 10% and decreases cost by 10-20%.
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- 3 🇺🇸 2,000+ sensors deployed across 80+ customers in the US.
- 4 🚀 Founder ran 4 startups with multiple exits, including an IPO that led to a \$1 billion valuation.
- 5 📈 \$1.5M run rate in Q4 2019 and explosive 500% CAGR over the last 3 years.
- 6 💰 GroGuru is standing out in the global agriculture industry, which generates \$2.4 trillion annually

Our Team



Patrick Henry President & CEO

Ran 4 startups with multiple exits. As CEO of Entropic, he took the company from pre-revenue through successful IPO and a \$1B valuation.



Farooq Anjum, PhD VP of Engineering & CTO

20+ years experience building complex systems. Designed wireless networks in 30+ countries. Published 60+ papers, wrote 2 books, and awarded 15 patents. Ph.D. in Electrical and Computer Engineering from University of Maryland College Park.



Jeff Campbell, PhD Chief Scientific Officer

Inventor of 19 patents from various soil sensors and the Stevens Hydraprobe. Ph.D. in physics from Dartmouth College.



David Sloane, PhD Chief Agronomist

20 years of experience in irrigation agronomy. Ph.D. in Agronomy from University of Adelaide in Australia.



Vince Ferrante VP Sales

20 years of experience selling complex system solutions products. Founded Martek, a rep company that he sold Ewing Foley.

The GroGuru Story - Helping Farmers and Creating a More Sustainable Planet

GroGuru provides a software as a service for strategic water management - assisting farmers in sustainable crop monitoring that saves them water, resources, and of course, extra work. Deploying over 2,500 soil sensors across over 20 crop types in the United States, GroGuru acquired \$620K in revenue in 2020 alone - a huge success in a very difficult economic environment.

Meet GroGuru®: The Future of Sustainable Farming

As complicated as humans are, we have two very basic essential needs: food and water. And as we know, those vital resources are being threatened due to climate

change and a growing population.

We think the best way to make things better is to start from the ground up - and that's why we help farmers.

STRATEGIC WATER MANAGEMENT

GroGuru® helps farmers make more money by increasing crop yield while saving water and other scarce resources in a sustainable way.

Using AI technology, our water management through soil monitoring assists farmers in growing more food, and saving more water.

We think the planet deserves a smart farm.

Introducing: Real-Time Data Tracking



A Partnership That Connects You
to Valuable Real-Time Data

GroGuru is continuing to stand out in the agriculture industry by signing an API access agreement with Valley Irrigation, A Valmont Company, which provides farmers with the opportunity to understand data in real-time. These devices are able to track center pivot irrigation systems, soil monitoring sites as well as weather stations which would ultimately improve crops like corn, cotton, wheat and other cereal crops. The future of this partnership is expected to bring a benefit to farmers by increasing efficiency of irrigation systems as well as being mindful of sustainability.



Member
United Nations
Global Compact

The Problem



Too Many People, Not Enough Food and Water

Let's look at the big picture: We have a global problem of catastrophic proportions where we simply cannot meet the basic needs of many people. And with more people every day comes more challenges.



UNDERNOURISHMENT

800M

CHRONICALLY UNDERNOURISHED
PEOPLE GLOBALLY TODAY

PRODUCTION SUPPLY

70%

INCREASE NEEDED IN GLOBAL
FOOD PRODUCTION BY 2050



WATER MISUSE

70%

OF GLOBAL FRESHWATER IS USED
FOR AGRICULTURAL IRRIGATION



Not to mention, farming is hard. Farmers typically run into problems with...



We believe soil monitoring for optimal water management is necessary to yield enough crops to feed our planet, but farmers tend to struggle with making practical irrigation choices. And although soil monitoring methods are out there, they tend to have some problems of their own.



SOIL MONITORING METHODS HAVE:

- High Total Cost of Ownership
- Scalability Issues
- Sub-Optimal Yield Improvement
- Insufficient Data Continuity for AI

Plus, water management is primarily about the management of the root zone of the crop. The tools needed to do this prior to GroGuru were only a partial answer to this massive problem.

The GroGuru Solution...



Yielding Farmers More Crops and More Money

Our mission is to help farmers make more money by increasing crop yields and more efficiently using water and other scarce resources like labor, energy and fertilizer in a more sustainable way.

We do this by providing superior decision support tools to farmers and agronomic consultants for strategic water management.



Cost-Effective

Affordable solution that pays for itself in one growing season



Scalable

Permanent installation solution with **30X** more scalability than competitors



↑ Crop Yield

10 - 20% increased crop yield as a starting point



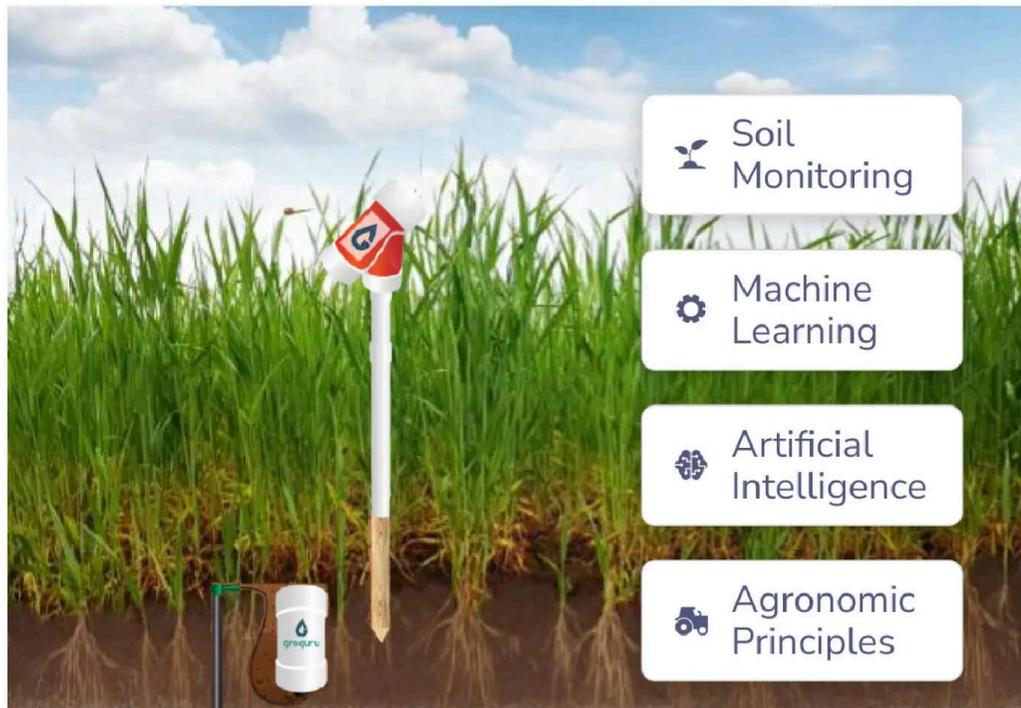
Labor Saving

Unlike competitors, GroGuru does NOT require annual replacement

Crops get fed water and nutrients through the root zone of the crop, inspiring us to monitor from the root zone up.

IT'S ALL ABOUT THE ROOTS

Optimal irrigation has the single biggest impact on crop yield and crop quality by creating a robust root system. That's why we monitor from the root zone up with:



Soil Monitoring



Machine Learning



Artificial Intelligence



Agronomic Principles



With these methods, we provide an enhanced data set combined with other data like rainfall, applied irrigation, weather forecast and crop models to give farmers additional insights about how to optimally manage water usage out in their fields irrigation.

In short, we enable farmers to better irrigate their crops - making more money while they're at it, and acting more sustainably while they're at it, too.

THE GroGuru SOLUTION



 Communicates without cables via our proprietary wireless underground system

 Conveniently transmits the data to the cloud

 Uses AI to interpret data and provide valuable irrigation insights

 Is easy to install and intuitive to use

 Incorporates proprietary technology with 4 issued patents and 5 patents pending

A Trillion Dollar Market

If you fly over Kansas or Nebraska, this is what you will see: millions of acres of irrigated farmland. If that seems like a lot, it's because it is. After all, the global agriculture market is \$2.4 trillion annually. And the market for soil moisture monitoring is best looked at from an acreage standpoint.

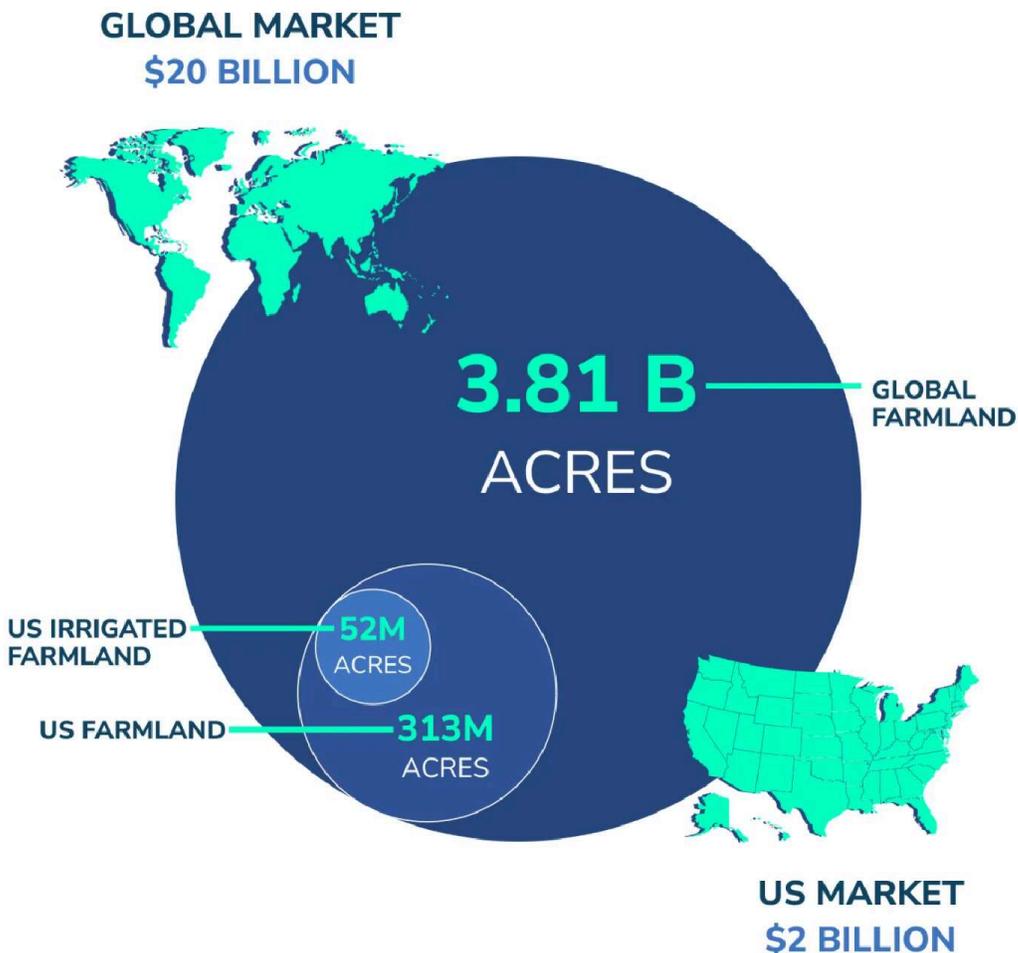
According to the USDA, there are 52 million irrigated acres in the US, of which 44 million acres is annual field crops like corn, soybean, cotton, wheat, sorghum, and alfalfa.

There are 313 million total farming acres in the US and 4.2 billion acres globally.

So assuming...

- Reasonable priced reductions over time
- Reasonable deployment assumptions of solid sensors based on GroGuru's modeling

The market, at full penetration, is \$2 billion annually in the US and \$20 billion globally (source).



Covering a Lot of Ground

Since our beginning, we've...

- Deployed over 2,500 sensors across over 20 crop types in various geographies in the United States.

- Established a dealer footprint that represents 6 million deployable acres.
- Achieved \$620K in revenue in 2020 in a very difficult economic environment where a number of our competitors went bankrupt or were sold.

GroGuru DEPLOYMENTS



We are now on our third generation of software as service (SaaS) and our third generation of internet of things (IoT) for farming products. We have formed key strategic partnerships with market leaders in the precision ag space, and have many more in the queue eager to work with us.

AFFILIATIONS



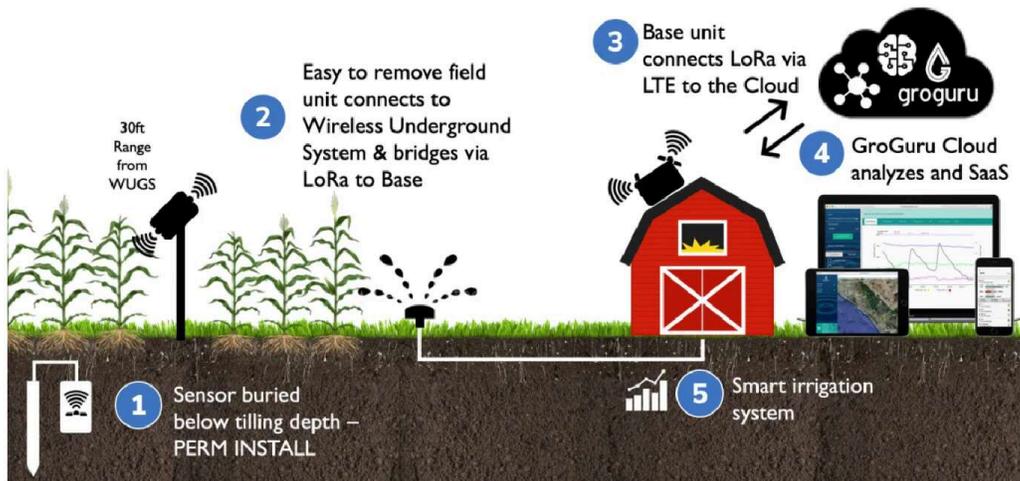
AWARDS



Farmers, We Target Your Specific Needs

You might be wondering: How exactly does GroGuru provide these insights to farmers and agronomic consultants?

HOW IT WORKS - AgTech IoT



- 1** Sensor buried below tilling depth- PERM INSTALL
- 2** Easy to remove field unit connects to WUGS & bridges via LoRa to Base
- 3** Base unit connects LoRa via LTE to the Cloud
- 4** GroGuru Cloud analyzes and SaaS
- 5** Smart irrigation system

We do this through AI-based soil monitoring, which we call Wireless Underground System for Permanent Installation of Soil Sensors, aka GroGuru® WUGS.





Once we collect data from the root zone of the crop, we add other critical data and apply machine learning and AI in the Cloud to determine things like...

- Root growth
- Root depth
- Available moisture in the soil
- Whether the soil is more sandy or clay based
- If soil has compaction layers.

We then present this information in a simple, intuitive, farmer-friendly user interface that the farmer can access on their mobile device, tablet or computer.

GroGuru® InSites

WEB-BASED AND MOBILE APPS TO VIEW DATA



The GroGuru® InSites platform works with GroGuru's own telemetry solutions and soil moisture sensors, but also works with an impressive group of third-party

sensors.

As a result of the GroGuru InSites approach, we are able to deliver nuanced and comprehensive real-time data, which is instantly actionable.



This includes:

- GPS-based Farm Scale view
- An “Irrigate by pictures” interface to visualize the root zone and soil profile
- Crop-specific irrigation templates guide users both before, and during the growing season to manage soil moisture conditions in the field.
- Alternative field telemetry solutions for perennial crops root vegetables

GroGuru WUGS is a 100% wireless underground system that can be buried below the till depth and communicates through several feet of soil wirelessly. This eliminates the need for the sensors to be annually installed and removed for seeding and harvesting, respectively, for these annual crops - making less work for the farmer that's more sustainable.

Investor Testimonials

Chris Graebe - CEO at StartupCamp, Investor at RagingBull





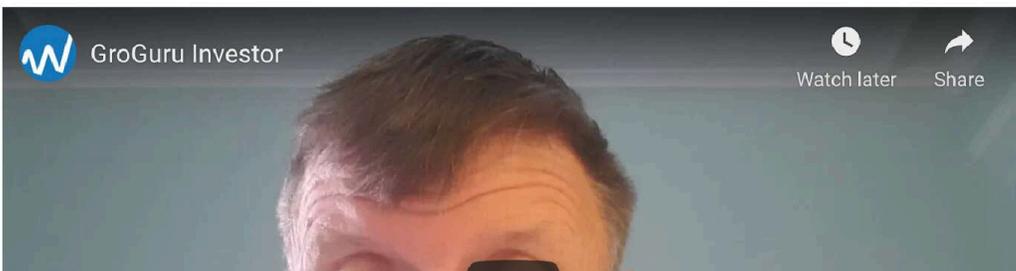
Denise Longley - Managing Director at Longley Capital



Matt Shekoyan - VP of Strategy at Sunkist

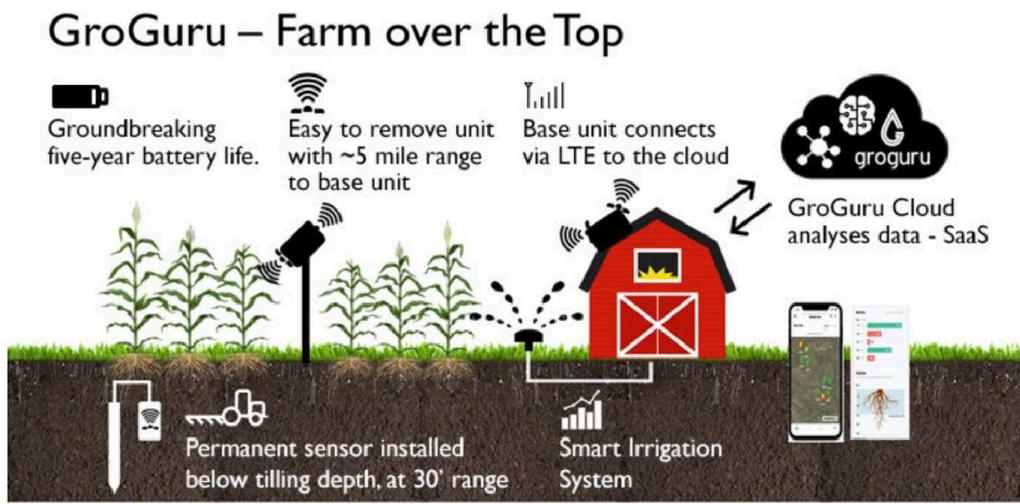


Ian Buddery - Advisory Board Member at GroGuru, Chairman at Maestrano





Nearly all soil moisture sensors in the market today use cables from the sensors in the ground. This requires labor-intensive annual installation and removal of the sensors, and many farmers do not want any cable-based systems around their crops during harvest. GroGuru solves this problem by eliminating these cables and enabling a permanent installation model for soil sensors.



Our breakthrough Wireless Underground System (WUGS) technology dramatically reduces the total cost of ownership, improves scalability, and gives farmers year-round data through the GroGuru app.

GroGuru App

- Uses AI to automatically infer the water holding capabilities at the installed site
- Helps farmers make irrigation decisions by using templates tailored to the crop
- Uses AI to infer the effectiveness of irrigation in terms of water

of irrigation in terms of water percolation and root growth

- Alerts and snapshot views to help the growers and dealers understand the state of the farms very efficiently
- Ability to access the app on your computer, tablet, or mobile device



The GroGuru Solution



-  Communicates without cables via our proprietary wireless underground system.
-  Conveniently transmits the data to the cloud.
-  Uses AI to interpret data and provide valuable irrigation insights.
-  Is easy to install and intuitive to use.
-  Incorporates proprietary technology with 4 issued patents and 5 patents pending.

We additionally provide a cable-based permanent installation solution for perennial crops that offers an industry-leading price-performance and uses GroGuru soil sensor technology to measure soil moisture, salinity, and temperature.

The Market



According to the FDA, only about 10 percent of farmers in the U.S. (which is a potential \$2 billion annual market alone) are using soil sensors today. Farmers that are using this technology are seeing increased crop yield and more efficient use of water and other resources, but the cost of annual replacement has been prohibitive for many. We solve that problem, giving us a unique opportunity in a massive \$20 billion potential global market.

We're Growing Fast



We have already deployed over 2,000 sensors across over 80 customers in the United States. This includes deployments on several hundred sites across over 20 crop types including alfalfa, cotton, lemons, walnuts, grapes, asparagus, green beans, blueberries, pistachios, soybeans, corn, hemp, olives, roses, raisins, cannabis, oranges, tomatoes, sorghum, and almonds.

Initial customer deployments started in 2017, and we have now deployed in several key geographies across the US.

GroGuru Deployment in the U.S. Market



Our Business Model



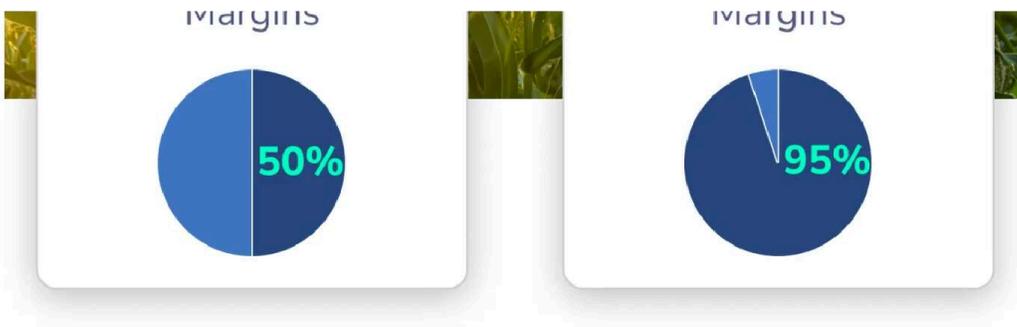
Historically, we sold hardware and had a companion SaaS service. However, we've recently moved hardware customers to an operating lease subscription model, offering a standalone SaaS platform that works with third party hardware providers.

TARGET BUSINESS MODEL

Hardware-enabled SaaS, IoT for AgTech

Hardware Sales
Margins

Annual Subscription
Margins



Farmers Know We're a Game-Changer

GroGuru is already actively providing results for farmers around the US. And their feedback says it all:

Farmers See WUGS as a Game Changer

"Permanent install and the data all throughout the year and across multiple years from the same spot is priceless."



Grant Norwood,
Norwood Farms
3,000 acres

"The ability to permanently install soil moisture sensors will greatly improve our ability to manage water and should improve our yields and sustainability."



Tom Moore,
Moore Brothers Farming
15,000 acres

"A permanent probe is the only solution to accurately measure soil moisture the entire year."



Harold Grall,
Hasta Farms
6,500 acres

The Future is Bright for GroGuru!

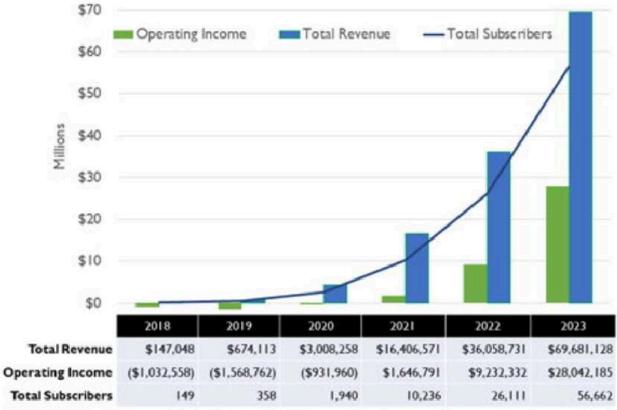
We see ourselves as the hardware and irrigation system's 'agonistic player' in the strategic water management space within the next five years.

We feel that we are at the very early stages of what is expected to be a multi-decades long growth market opportunity - expecting to surpass one million deployed acres within the planning cycle of the company.





Explosive Growth Opportunity



500% CAGR over the last three years

Recession resilient business: Farmers continue to farm

NOTE: This slide contains future looking projections which cannot be guaranteed.

Seasoned Leaders

Our team has the right business acumen, domain expertise, and technical knowledge to win in this market. We also have a strategy of developing strategic and dealer partnerships that will allow us to leverage the best in class portions of the total solution from ecosystem partners.

GroGuru Executive Team (includes founders):



PATRICK HENRY
CEO



FAROOQ ANJUM, PhD
Co-Founder, CTO, VP of Engineering

Co-Founder, CEO, VP of Engineering



JEFF CAMPBELL, PhD

Co-Founder, Chief Architect

VINCE FERRANTE

VP of Sales



DAVID SLOANE, PhD

Chief Agronomist

GroGuru's Farmer Advisory Board Members:

Kevin Wright, AFM

Chief Operating Officer at Hancock Natural Resource Group

Grant Norwood

Owner, Norwood Farms

Henry County, Tennessee

Matt Shekoyan

Former CFO, Wonderful Citrus

Mike Jarrard

Former President of Mann Packing

Former Chairman of the Western Growers Association

Harold Grall

Owner, Hasta Farms

Board Member and former President, North Plains Groundwater Conservation District

A Major Growth Opportunity

We have a unique solution to a significant problem in what is expected to be a massive and rapidly growing market. We believe we are paving the way to strategic water irrigation management to help farmers heal our planet one acre at a time.



We differentiate ourselves over time by...

- Continuing to protect our intellectual property
- Building strategic partnerships with key ecosystem partners
- Driving significant profitability as we grow

Will you join us on our journey? Watch your investment “grow” with us while helping to combat a global crisis.



Invest in GroGuru

Downloads

[GroGuru Investor Deck 2.4.22](#)