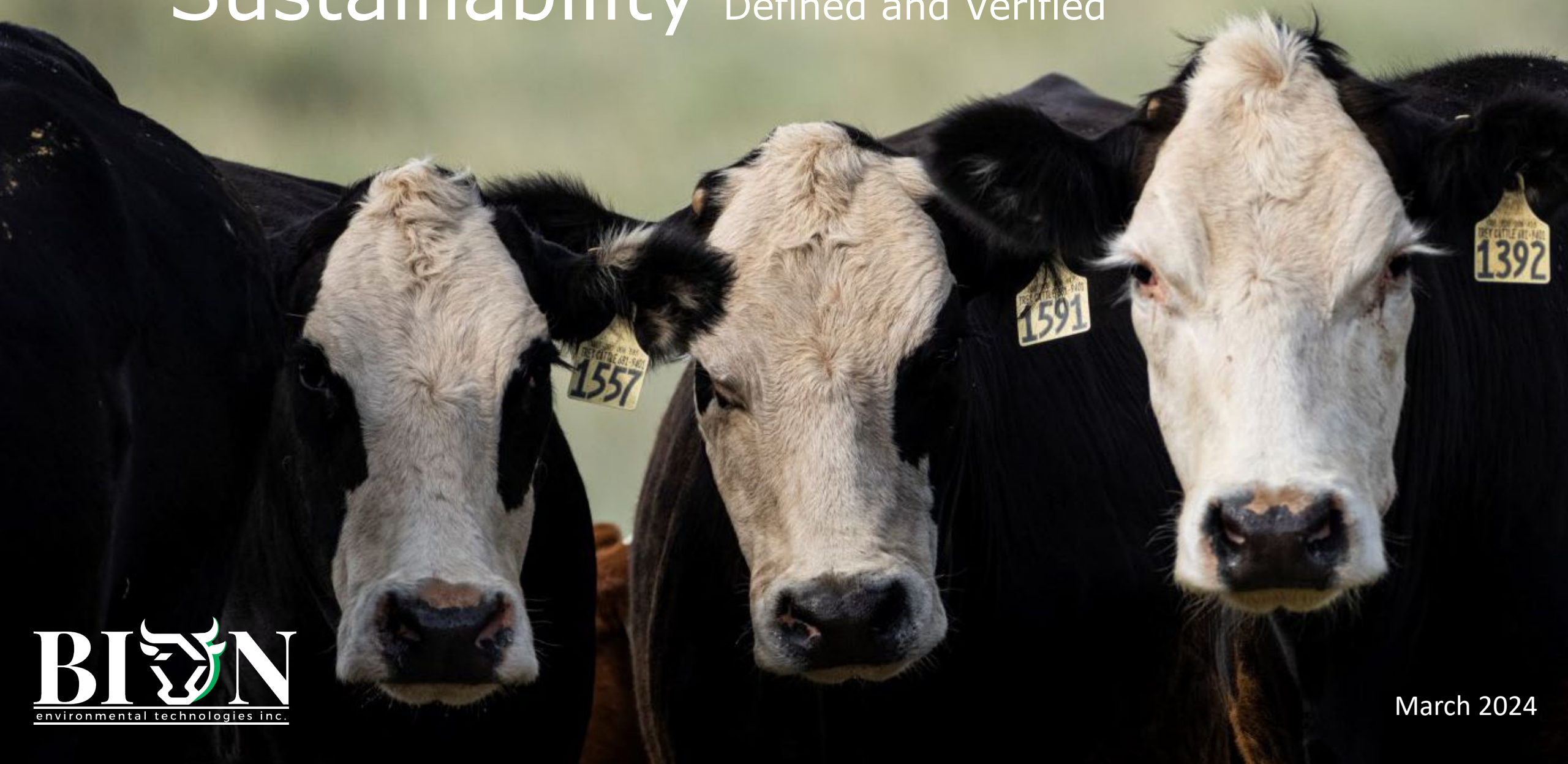


# Sustainability

Defined and Verified



This presentation contains, in addition to historical information, forward-looking statements regarding Bion Environmental Technologies, Inc. (the "Company"), which represent the Company's expectations or beliefs including, but not limited to, statements concerning the Company's operations, performance, financial condition, business strategies, and other information and that involve substantial risks and uncertainties. The Company's actual results of operations, most of which are beyond the Company's control, could differ materially. For this purpose, any statements of expectations or revenue projections contained in this presentation (that are not statements of historical fact) may be deemed to be forward-looking statements.

Risk Factors that could cause or contribute to such difference include, but are not limited to, limited operating history; uncertain nature of environmental regulation and operations; uncertain pace and form of development of nutrient (N&P) reduction credit market; risks of development of first of their kind sustainable beef and integrated projects; need for substantial additional financing; competition; dependence on management; and other factors. Additional information regarding the Company and its Gen3Tech platform should be reviewed on the Company's website at <https://bionenviro.com/>. Investors are urged to consider closely the disclosures and risk factors in the Company's current Form 10-K, filed with the Securities and Exchange Commission, available at [www.sec.gov](http://www.sec.gov).

- \$175 billion livestock industry being disrupted by its environmental impacts and changing consumer demand for improved sustainability
- Bion's Gen3Tech platform minimizes environmental impacts and recovers resources – clean water, precision fertilizers, renewable energy
- Three opportunities: license, retrofit existing facilities, Impact Beef
- Core tech now in final design of full-scale systems phase
- Short term: commence project(s); senior exchange uplist
- Long term: assemble strategic partners in production, distribution, and finance; expand project development pipeline

# Today's U.S. Livestock Industry



Beef

**90M**



Swine

**60M**



Poultry

**2.2B**

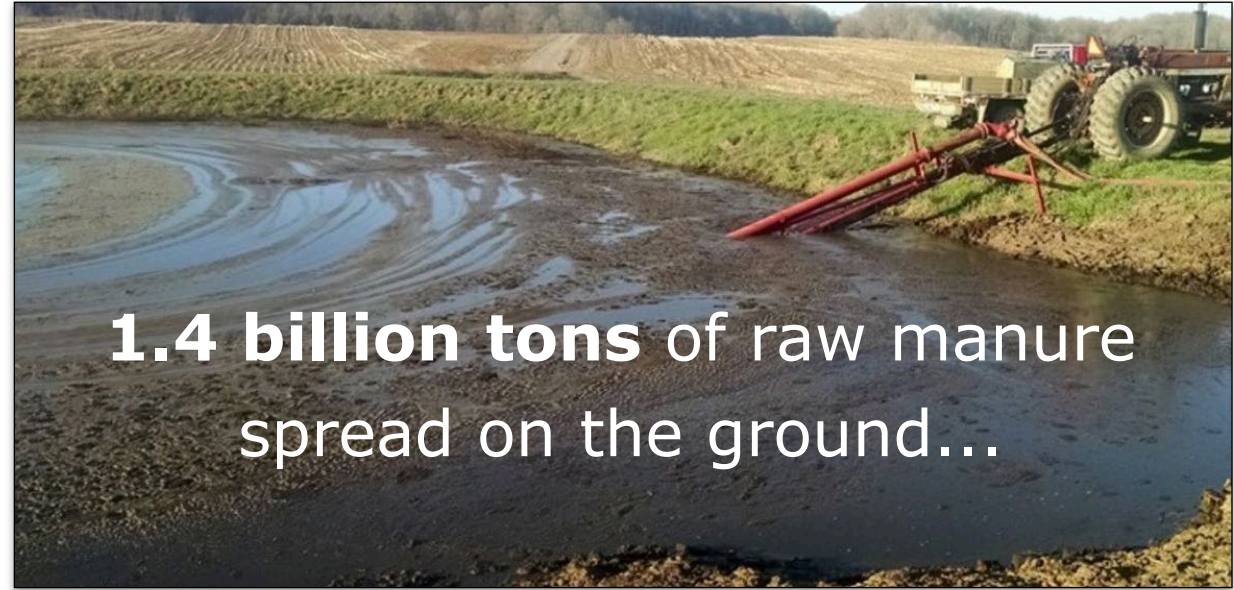


Dairy

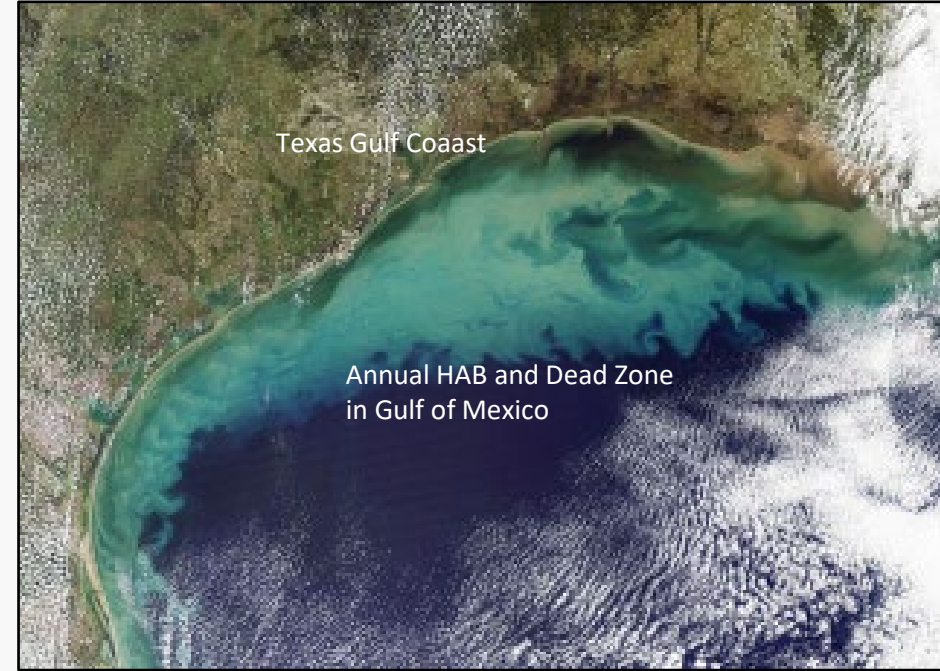
**9M**

On CAFOs

**90%+**



# Harmful Algae Blooms & Dead Zones



## Greenhouse Gases/ Climate Impacts

- Methane, CO<sub>2</sub>, N<sub>2</sub>O

## Ammonia losses

- Largest source in U.S.
- Volatile and mobile
- PM<sub>2.5</sub> (particulate air pollution)
- Disperses nitrogen/nitrates

## Nutrient runoff: nitrogen/phosphorus

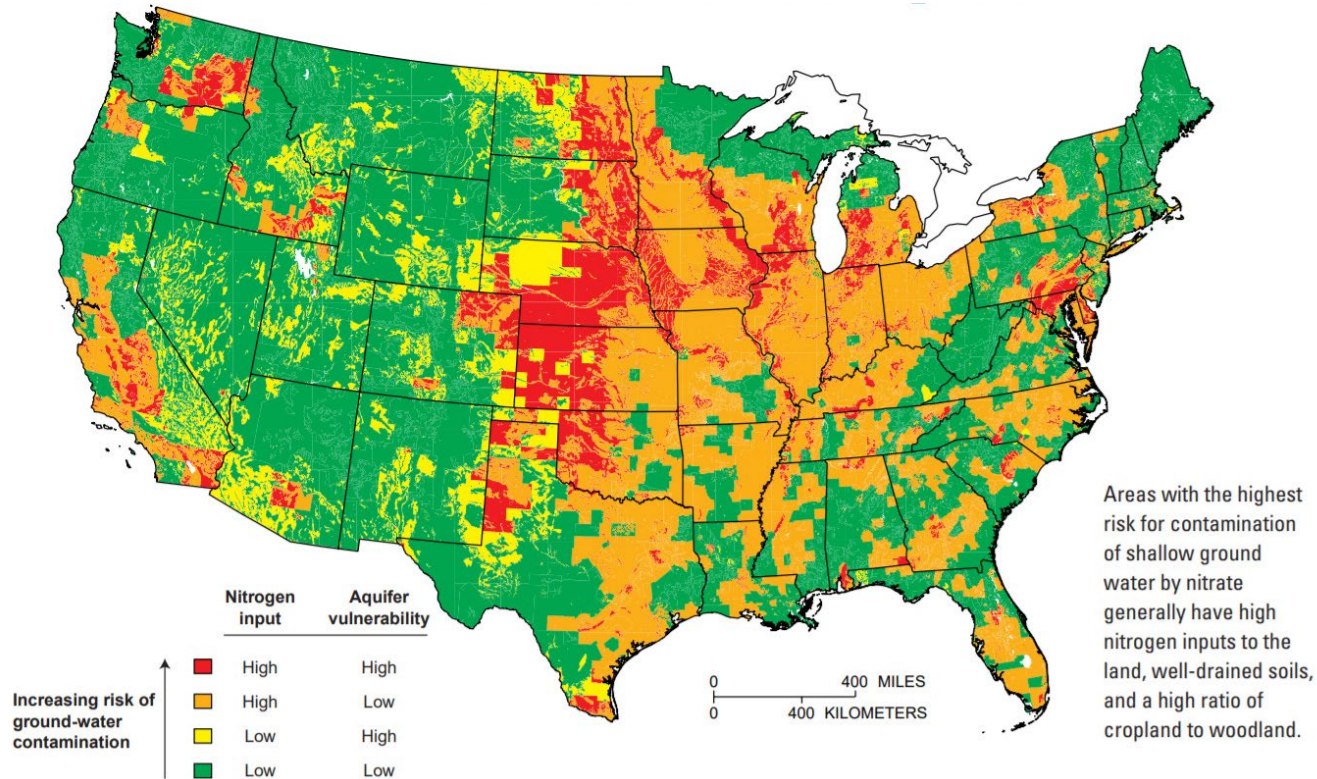
- Harmful Algae Blooms (HABs)
  - Block sunlight
  - Dead Zones
  - Toxic HABs increasing
- Contaminated groundwater

## Pathogens

- Food-borne illnesses
- Anti-Microbial Resistance (AMR)

Phosphorus/salt buildup in soils

Hydrogen Sulfide, VOCs, odors



From USGS Circular 1225, The Quality of Our Nation's Waters.

## Risks

Infant methemoglobinemia (Blue Baby Syndrome)

- Why drinking water nitrate limits were originally set

Epidemiological studies

- Bladder cancer (studied)
- Breast cancer
- **Colorectal cancer (linked)**
- **Thyroid disease**
- **Neural tube defects/birth defects**
- Increased risk with nitrate levels below regulatory limits



## **Animal Waste AD**

### **[Why some people think California's cow manure methane plan stinks](#)**

"...manure digesters increase the presence of ammonia, a toxic gas present in cow manure and urine." [Behind a paywall. A text-only pdf of the article is attached.]

### **[Owner threatens to close Newaygo County bioenergy plant amid regulatory dispute](#)**

"...untenable regulatory requirement, which would require groundwater discharge permits to land apply digestate." - Amer Biogas Council comment. The issue is ammonia in the digestate and its impact on water resources. The discharge permit is to ensure ammonia control. It's a seismic shift.

### **[Michigan has a new way to fight climate change: Energy from cow poop and urine](#)**

The article describes Bion's animal waste AD and livestock facility retrofit opportunities

## **Groundwater – Nitrates (from ammonia)**

### **[EPA says Minnesota needs to take more action on nitrates in drinking water](#)**

"...more work is required by state agencies, local governments, and industry partners to reduce nitrate levels in our lakes, streams, and groundwater to protect drinking water for all Minnesotans."

### **[State asks owners of private wells to test their water, to help with statewide study of nitrate in aquifers](#)**

"Nitrate pollution in groundwater has been a long-running concern in Nebraska, where decades of use of nitrogen fertilizers and manure runoff from livestock operations have increased levels in aquifers. The state has one of the [highest rates of pediatric cancer in the nation](#), and nitrates in drinking water is one factor, according to state medical researchers. Nitrates have also been [linked to birth defects](#), other cancers and "blue baby syndrome"."

### **[Upcoming EPA Review of Nitrates in Waterways Raises Health and Environmental Questions About Synthetic Nitrogen Fertilizer Use](#)**

"EPA, in a quiet reversal of a 2018 Trump administration decision, is resuming an evaluation of the health impacts of nitrates in water..."

The article is about synthetic N, but the EPA Scientific Advisory Board report is about 'reactive N', including untreated manure.

From the report: "Excess reactive nitrogen compounds in the environment are associated with many large-scale environmental concerns, including eutrophication of surface waters, toxic algae blooms, hypoxia, acid rain, nitrogen saturation in forests, and global warming. In addition, reactive nitrogen (referred to as Nr) is associated with harmful human health effects caused by air pollution and drinking water contamination."

## Liability: Benefit

- Nutrients (N&P): low-carbon and organic precision fertilizer products
- Methane: Renewable Natural Gas
- Barn roof space: PV solar
- Slurry: clean water (~30%)

## Added Benefits

- Improved production efficiencies
- USDA-certified brand: premium pricing
- Clean water/ecosystem services: monetize?



Bion's patented technology and strategic partner approach support a transformational opportunity

# Ammonia Recovery System

## Fair Oaks (Indiana)

- Patented Core Tech
- Startup  
July 24, 2023
- Demonstrated steady-state  
Sept 19, 2023
- Stakeholder tours
- Optimized for final design  
Jan 1, 2024
- Exceeded expectations for ammonia capture and recovery
- Final design in process



## Ammonia Distillate

- Concentrated ammonia solution

## Ammonium Bicarbonate

- Ammonia stabilized with CO<sub>2</sub> from the waste stream
- ‘Pure’ N fertilizer
- Solution
  - Low concentration solution OMRI-Listed (organic use)
  - 10-0-0 solution OMRI listing application submitted
- Crystals
  - Low-Carbon
  - Water-soluble

Water Smart & Climate Smart



## License/Partner

- Anaerobic Digester (AD) ammonia control
  - Stand-alone ammonia control solution
  - Animal waste, industrial and municipal wastewater
  - Regulation exists and/or evolving
- International opportunities

## Retrofit

- Existing large-scale U.S. livestock facilities

## Grain-finished beef (and pork)

- Sustainable and Sustainable+Organic at scale
- Not available today (at scale)
- Tech now demonstrated at commercial scale
- Building team, project pipeline



# Impact Beef



Improved animal health and welfare  
Dramatically lower environmental footprint  
Better production efficiencies and economics

## Challenges

Low-margin commodity industry

Fragmented

Increasingly displaced supply chain

Primary target of 'anti-meat' messaging

Consumers increasingly demand sustainability (but demonstrate a willingness-to-pay for it)

### **Feedlots (CAFOs) are outdoors**

- Weather vs livestock performance
- Comprehensive manure treatment and resource recovery is not possible
- Environmental impacts

## Opportunities

New revenue sources

Strategic partner approach

Strategic relocation

Positive response - no Greenwash

Deliver with premium pricing

### **Move into barns**

- Improve performance
- Maximize manure treatment and resource recovery efficiencies
- Minimize environmental impacts

## “Shust”

Ammonia, AMR bacteria, hydrogen sulfide, PM/dust







Slatted floors continuously pass waste to collection below

Shelter from weather/sun

Improved health and welfare

- Reduced antibiotic usage

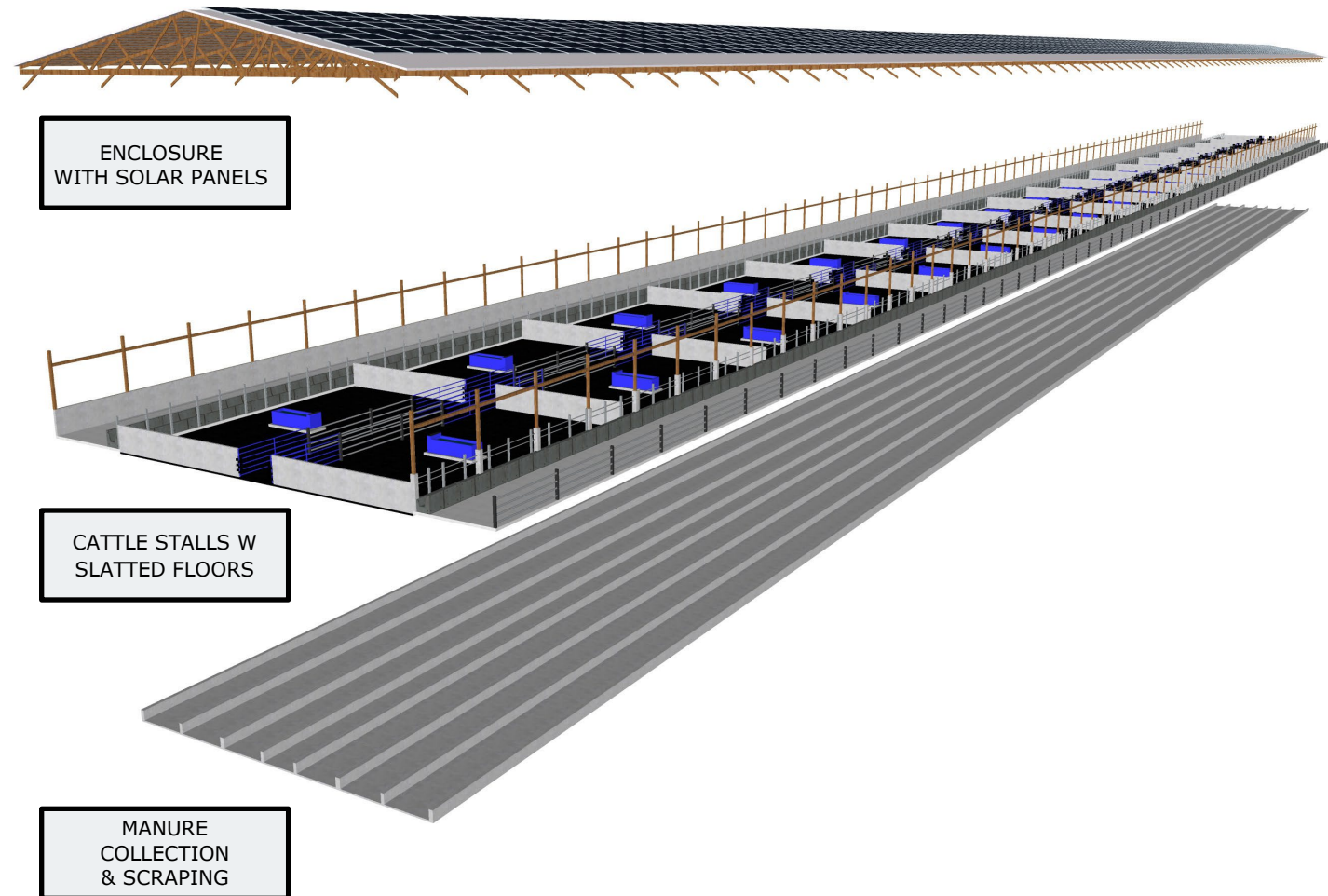
Improved production economics

- Higher rate/lower cost of gain
- Shortened finishing times
- Reduced mortality
- Current manure handling eliminated

Roofs: PV solar, rainwater capture

24/7 manure collection

- Minimize enviro impacts
- Maximize resource recovery and revenues





## Finished beef

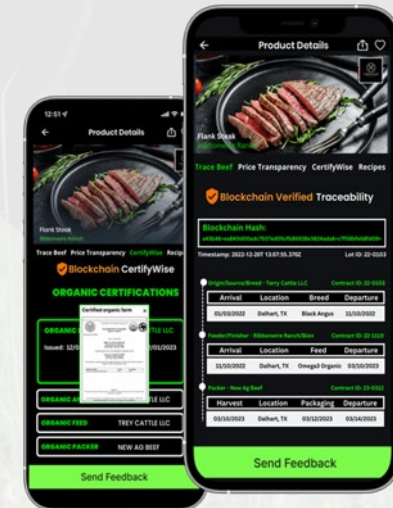
- Not an alternative or substitute

## Sustainability third-party verified

- Climate: Methane, CO2, N2O
- Ammonia/PM2.5
- Nutrients N&P
- Pathogen kill
- Clean water recovery

## Sustainability certified by USDA Process-Verified Program (PVP)

## Transparent and communicated to the consumer at POS - TransparencyWise



Walmart: largest U.S. beef retailer

Sustainable Beef, LLC investor

Recent investment in KS processing plant

*Taking control of [its] supply chain for Angus beef...looks to offer higher quality products...*  
(Reuters)

Bion LOI with Olson Feeders, Founder, Sustainable Beef, LLC



WATCH LIVE

## RETAIL

# Walmart invests in ranchers' company as more shoppers opt for premium beef

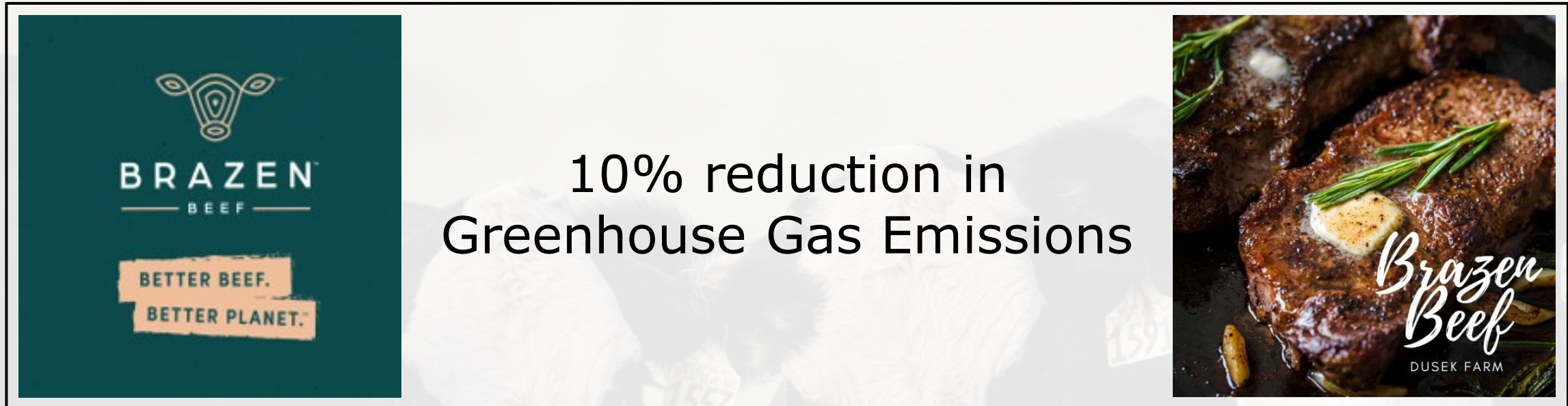
PUBLISHED WED, AUG 31 2022 9:00 AM EDT

Melissa Repko  
[@MELISSA\\_REPKO](#)

WATCH LIVE

## KEY POINTS

- Walmart is investing in Sustainable Beef, a rancher- and beef producer-owned company, to expand its supply of Angus beef.
- The nation's largest grocer is investing in agriculture and food production as consumers eat differently and want to know more about where their food comes from.
- Fresh groceries are a growth driver for the retailer, said Tyler Lehr, senior vice president of merchandising for deli services, meat and seafood for Walmart U.S.



The image contains two main visual elements. On the left is the Brazen Beef logo, which features a stylized cow head icon above the text "BRAZEN BEEF" and a tagline "BETTER BEEF. BETTER PLANET." below it. On the right is a photograph of a cooked steak garnished with a pat of butter and a sprig of rosemary, with the text "Brazen Beef" and "DUSEK FARM" overlaid on the bottom right of the image.

10% reduction in Greenhouse Gas Emissions

*“Consumers would be willing to pay at least 24 percent more for environmentally friendly, sustainable options at retail.”*

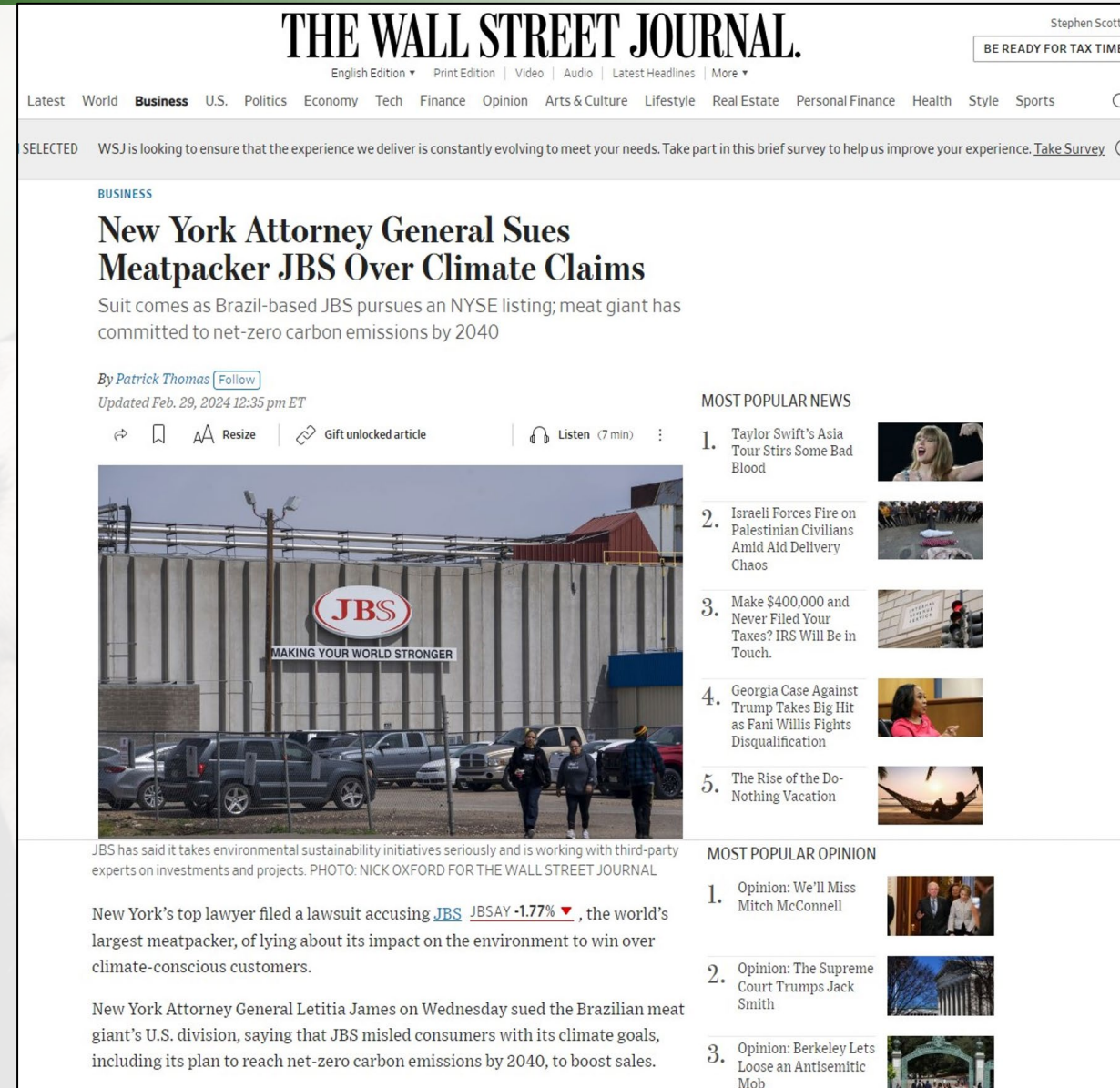
Tyson Foods on the launch of their new low-carbon Brazen Beef

## Sustainable Improvements

- Meaningful
- Comprehensive
- Transparent/Verified
- Affordable

## Retail, Fast Food, Food Service Distributors

- Respond to consumer demand and changing demographic
- Maintain/build market share; improve profits
- Meet Net-Zero promises
- Provide a positive and verified response to investor/enviro/consumer advocacy group criticisms
- No Greenwashing
- Meet ESG commitments/reduce climate change risk



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**BUSINESS**


### New York Attorney General Sues Meatpacker JBS Over Climate Claims

Suit comes as Brazil-based JBS pursues an NYSE listing; meat giant has committed to net-zero carbon emissions by 2040

By Patrick Thomas [Follow](#)  
Updated Feb. 29, 2024 12:35 pm ET

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JBS has said it takes environmental sustainability initiatives seriously and is working with third-party experts on investments and projects. PHOTO: NICK OXFORD FOR THE WALL STREET JOURNAL




New York's top lawyer filed a lawsuit accusing [JBS](#) [JBSAY -1.77%](#), the world's largest meatpacker, of lying about its impact on the environment to win over climate-conscious customers.

New York Attorney General Letitia James on Wednesday sued the Brazilian meat giant's U.S. division, saying that JBS misled consumers with its climate goals, including its plan to reach net-zero carbon emissions by 2040, to boost sales.

#### MOST POPULAR NEWS

1. Taylor Swift's Asia Tour Stirs Some Bad Blood 
2. Israeli Forces Fire on Palestinian Civilians Amid Aid Delivery Chaos 
3. Make \$400,000 and Never Filed Your Taxes? IRS Will Be in Touch. 
4. Georgia Case Against Trump Takes Big Hit as Fani Willis Fights Disqualification 
5. The Rise of the Do-Nothing Vacation 

#### MOST POPULAR OPINION

1. Opinion: We'll Miss Mitch McConnell 
2. Opinion: The Supreme Court Trumps Jack Smith 
3. Opinion: Berkeley Lets Loose an Antisemitic Mob 

Barns improve production efficiencies

New or enhanced **revenues**/benefits

- Sustainable brand premium
- Biogas/RNG
- PV Solar
- High value nitrogen fertilizer (organic and low-carbon)
- Pasture amendment fertilizer (organic)
- Pharma data
- Ecosystem services: clean water subsidies/incentives
- Carbon Credits
- Green Ammonia

**Strategic Partner Approach**



# Bion Advantage – Production Economics

**Bion Environmental Technologies**  
**Sustainable Beef Production ProForma**  
**Single Unit - 15,000 head capacity (Slots)**  
**Annual Production: 42,500 head**

<b>Cattle Feeding Proforma</b>	<b>\$ ,000</b>
<b>Revenues</b>	
Sustainable Beef Certification	5,253
Nitrogen Fertilizer	8,157
Biogas & Credits	3,737
Solar	3,810
Barn Efficiencies	4,275
Amendment Fertilizer (Residual N,P,K)	0
Pharma - Production Data	0
Ecosystem Services (Clean Water Subsidies/Incentives)	--
CO2 Sales	--
Green Ammonia	--
<b>Total Revenue</b>	<b>25,232</b>
<b>Expenses</b>	
Operating Expenses	3,886
Fertilizer Product Transportation Cost	680
Supply Chain Premium	2,138
<b>Total Operating Expenses</b>	<b>6,704</b>
<b>Ebitda</b>	<b>18,529</b>
Debt Service	-6,301
<b>Project Level Pre-Tax Cash Flow</b>	<b>12,228</b>

<b>Capex</b>	<b>\$ ,000</b>
Anaerobic Digester*	13,000
Solar System*	10,000
Barn System	23,000
Bion Technology	6,000
Shared Infrastructure	3,000
Pre-Development (Site Plans, Permits, etc)	3,500
<b>Total Capex</b>	<b>58,500</b>
ITC (*Items Eligible for 30% ITC)	6,900
<b>Net Capex (with ITC applied)</b>	<b>51,600</b>

<b>Funding</b>	<b>Principal</b>	<b>Rate</b>	<b>Term</b>	<b>Ann PI</b>
Equity	10,320			
Contributed Cap	2,580			
Sub Debt	12,900	16%	7	-3,194
Senior Debt	25,800	8.5%	15	-3,107

Potential investors should review the disclosures and risks on Slide 2, as well as materials on the Company's website and SEC 10-K and 10-Q filings. Supporting models and assumptions available upon request.

- Team additions
  - Board
  - Management
  - **Advisory Grp**
- **Capitalize/Uplist application**
- Strategic partners
  - **Production/platform**
  - **Biogas/RNG**
  - **Fertilizer**
  - **Protein Distribution**
- Organic applications and growth trials
- **Fair Oaks Final Design**
- **FO Engineering Report**
- Commence first Project
  - Permit
  - **Finance**
- New producer partners
- New Market Opportunities
  - **Dairy, swine, poultry retrofit**
  - **Stand-alone solution for industrial/muni wastewater AD**

Potential investors should review the disclosures on forward looking statements and risks on Slide 2, as well as materials on the Company's website and SEC 10-K and 10-Q filings.

May 2022 Bill O’Neill named as CEO

- Successful 30-yr meat industry career focused on ‘what’s next?’

Sep 2022 Advisory Group established

- Enviro regs & policy; ag & animal husbandry; dairy/beef-on-dairy; organic feed; state & federal gov’t affairs; beef industry

Dec 2022 Lily Edwards-Callaway, PhD, joins Advisory Group

- CSU Professor world-recognized for work in animal health and welfare

Jan 2023 Bion/BetterFedFoods to Form Strategic Alliance

- Produces algae-derived Omega 3 feed supplement and soil conditioner for healthier cattle and feed

Feb 2023 Salvatore Zizza joins Bion’s Board of Directors

- Decades of experience in institutional finance, commerce, and public company practices
- Establish and chair Audit Committee (requirement for senior exchange uplist)

Feb 2023 Bill Rupp joins Bion’s Board of Directors

- 25 years at Cargill. Last 10 as President, Cargill Beef for North and South America
- 5 years as President, JBS Beef for North America
- Senior Advisor to Sustainable Beef, LLC

Nov 2023 Strategic Alliance with Transparency Wise

- Provide resources and technology to measure, verify, and report regenerative practices and climate-smart impacts up and down the value chain

Dec 2023 Steve Sands joins Advisory Group

- Former President of Protein Brands for Performance Foodservice (PFGC)

Dec 2023 Chris Cook joins Advisory Group

- Current Head of Business Development for Syngenta

Expect More

## Ribbonwire Ranch

Largest supplier of organic beef in Texas; organic feed production

- One 15K-hd module with option for three more
- Supply agreement with Wegmans

## Olson Feeders/TD Angus

Founding member of Sustainable Beef, LLC (part-owned by Walmart) in Nebraska

- Three 15k-hd modules
- Supply agreement with Walmart through Sustainable Beef, LLC

## Dakota Valley Growers

Integrated farm/finish operation in the Red River Valley in northeast North Dakota

- One 15k-hd module
- Barns will mitigate weather extremes

## Expect More

“Ten years ago, when I was with JBS, I was introduced to Bion’s technology and decided it wasn’t right for us then. They were just early.

A lot has changed in the last decade: the renewable energy market; Bion’s technology evolution; and especially today’s consumer, who is increasingly demanding products that are produced transparently and sustainably.

I believe Bion’s time has come.”

- Bill Rupp

