



Bluegrass AgTechTM DEVELOPMENT CORP

Cultivating agricultural innovation in Kentucky

Impact Report

Founding Years: 2023-2025

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Letter from the Executive Director



When Bluegrass AgTech Development Corp (BADC) launched, we set out to do something Kentucky had never done before: build a dedicated, statewide program connecting agtech innovation to the farmers and agricultural economy that define this state. The report you are reading is a reflection of what that commitment has produced in our first three years.

The results exceed what we envisioned at the outset. Through two rounds of our Challenge Grant program, BADC has awarded \$925,000 to ten Kentucky agtech companies, catalyzing more than \$7.4 million in additional funding, creating 67 jobs, engaging 59 farms, and impacting hundreds of acres of Kentucky agricultural land. These are not projections or estimates of potential. They are outcomes — real companies, real farms, real economic impact for the Commonwealth.

None of this happened in isolation.

BADC's Challenge Grant program works because of the network of partners and institutions that have invested their time, expertise, and credibility in this mission. Our board members from the Lexington-Fayette Urban County Government (LFUCG), the Kentucky Department of Agriculture, the University of Kentucky Martin-Gatton College of Agriculture, Food, and Environment, and Alltech have provided the strategic leadership and institutional backbone that gives our work its reach and its credibility.

The partners, advisors, and subject matter experts who have engaged with our program have brought real-world expertise and genuine commitment to every company we have awarded. Their involvement has been instrumental in building this organization into what it is today.

Agricultural lenders, commodity organizations, and industry partners have helped us connect innovation to the marketplace. Every dollar we have deployed has been amplified by the people and organizations who showed up alongside us.



Jacob Ball
Executive Director

To each of them: thank you. BADC is a public-private partnership in the truest sense, and the impact you see in this report belongs to all of us.

We are building something that lasts.

The Challenge Grant is our flagship program, but what it has produced is larger than any single award. Around it, a genuine agtech ecosystem is forming in Kentucky — a community of founders, farmers, investors, researchers, and policy leaders who are investing in the future of this state's agricultural economy together. That ecosystem is what makes this work durable and what positions Kentucky to compete nationally in the years ahead.

Round 3 of the Challenge Grant program is now underway. Our pipeline is growing, our partnerships are deepening, and our model is proven. We enter the next chapter of BADC's work with full confidence in where we are headed and deep gratitude for the foundation our partners and board have helped us build.

Kentucky's agricultural future is being shaped right now. We are proud to be at the center of that work.

Who We Are



Our Mission:

We are cultivating an innovation ecosystem for entrepreneurs and startups in the agricultural sector — with the goal of making Kentucky the agricultural technology capital of the United States.

The Founding Partners:



LEXINGTON



Martin-Gatton
College of Agriculture,
Food and Environment



KENTUCKY
DEPARTMENT OF
AGRICULTURE

How We Work:

Connect:

*Linking innovators
with capital*

Support:

*Providing expert
networks*

Scale:

*Positioning KY as
an agtech leader*

Impact Areas:



**SCALE
STARTUPS**



**FARMER
PROFIT**



**EXPAND
CAREERS**



SUSTAINABILITY



**STRENGTHEN
ECONOMY**



**RESEARCH
PIPELINE**

Board of Directors



LEXINGTON

Mayor Linda Gorton

Lexington-Fayette Urban County
Government



President

"This partnership is focused on attracting agtech companies to Lexington and all of Kentucky. Lexington and Kentucky have all of the ingredients to become a major hub for high-tech innovation in agriculture, attracting good jobs and new companies to our city."



Dr. Kyle McKinney

Vice President of Innovation, Alltech



Vice-President

"Bluegrass AgTech Development Corp is a powerful investment in Kentucky's future — bringing innovation to our farms, creating new opportunities for rural communities, and keeping our agriculture industry competitive in a rapidly changing world."



Martin-Gatton

College of Agriculture,
Food and Environment

Dr. Laura Stephenson

Vice President for Land-Grant
Engagement & Dean



Secretary

"A thriving AgTech hub will open doors for new research partnerships, innovative solutions and meaningful career pathways—helping more of our graduates stay in Kentucky and contribute to the future of agriculture right here at home."



**KENTUCKY
DEPARTMENT OF
AGRICULTURE**

Jonathan Shell

Kentucky Agriculture Commissioner



Treasurer

"Making Kentucky the center for agriculture technology and innovation in the United States, only furthers our ability to step up to the challenges facing our agriculture communities, thus impacting our influence on our country and our world. We hold firm in the belief that this will create positive impacts for all."

Our Focus Areas



The focus areas for BADC originated from a comprehensive five month study conducted by the Shelman Group. This strategic process utilized a problem-first methodology to identify how transformational technologies could solve specific market challenges within the Bluegrass region. By conducting extensive stakeholder interviews and analyzing global AgTech ecosystems, the study identified Kentucky's unique strengths in sectors like equine, spirits, and diverse mid-scale farming. These insights were synthesized with global consumer trends to establish a data-backed roadmap. This intentional approach ensures our resources are strategically directed toward the high-value opportunities where our region is uniquely positioned to lead.



Future-Proof Animal Protein

Building a protein-secure future for the world's growing population



Food is Health

Addressing health needs through affordable and accessible nutrition



Sustainable Food Systems

Driving diverse and sustainable agriculture ecosystems



Solutions For Mid-Size Farming

Customizing technologies to support mid-sized farms



Kentucky Traditions

Leveraging Kentucky's equine, food and beverage expertise



Challenge Grant Program



The Challenge Grant is BADC's flagship program and the primary vehicle through which we identify, fund, and accelerate Kentucky agtech companies. The program is open to any startup with a scalable business model currently located in Kentucky or seeking to establish a presence in the state. Applicants may offer products, services, or technologies addressing challenges across the agricultural value chain — including equipment, software, decision support tools, improved genetics, plant and animal protection technologies, and value-added products.

Each round follows a competitive process. Applicants are evaluated by a panel of agricultural, technology, and economic development experts across six criteria: impact on Kentucky agriculture, commercialization viability, team strength, customer value, economic impact and job creation, and innovation. Finalists are invited to pitch their companies to the judging panel before final selections are made.

Awards are structured as milestone-based grants of up to \$100,000, requiring dollar-for-dollar matching funds from the applicant. Recipients must establish or maintain a presence in Kentucky for a minimum of two years following their award — a condition designed to ensure that the economic benefits of the program stay in the Commonwealth. Winners are also invited to participate in the BADC Fellowship Program, connecting them to our partner network, mentorship resources, and ecosystem support.



Total Awards
Granted

\$925K



Companies
Awarded

10



Applications
Received

82

Impact at a Glance



CAPITAL & INVESTMENT IMPACT

\$925K GRANTS AWARDED	\$7.4M CAPITAL LEVERAGED	10 COMPANIES AWARDED	67 JOBS SUPPORTED	20 NEW POSITIONS
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8:1 RATIO OF ADDITIONAL CAPITAL LEVERAGED

FEDERAL VALIDATION

Multiple portfolio companies have secured competitive federal grants from USDA programs — affirming that Kentucky agtech companies are nationally competitive, not just locally promising.

PRIVATE INVESTMENT

Seed rounds, SAFE notes, and private capital calls across the portfolio reflect growing investor confidence that Kentucky is producing agtech businesses worth backing at scale.

STRATEGIC PARTNERSHIPS

Accelerator placements, university research partnerships, and industry collaborations extend the impact of our portfolio well beyond what grant funding alone could provide.

FARMER & AG ECONOMY REACH

\$622K PAID TO KY FARMERS	59 KY FARMS ENGAGED	880+ ACRES IMPACTED	6 NEW FARM PARTNERSHIPS
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COMMODITIES & SECTORS SERVED

● Hemp & Soy	PURCHASED
● Corn Stover	BYPRODUCT MKT
● Grain Straw & Switchgrass	BIOMASS
● Specialty Rotation Crops	PURCHASED
● Equine Operations	DIAGNOSTICS
● Livestock & Row Crops	PEST MGMT

GEOGRAPHIC REACH

● Western Kentucky	PADUCAH REGION
● Bluegrass Region	LEXINGTON
● Purchase Area	MURRAY / AUBURN
● Eastern Kentucky	PERRY COUNTY
● Metro Louisville	PROSPECT AREA

HOW OUR PORTFOLIO REACHES FARMS

DIRECT PURCHASING

Companies buy KY-grown inputs directly, creating stable new farm revenue streams.

LAND & LEASES

Multi-year leases for energy crops put consistent income into farm operations.

BYPRODUCT MARKETS

Stover, residue, and distillery byproducts become new sellable products.

FARM TOOLS

Diagnostics and pest management reduce costs and improve crop and livestock outcomes.

Challenge Grant Awardees



Round 1: 2023-2024



Hempwood | *Murray, KY*

Hempwood uses a patented bio-mimicry process to transform hemp fibers and protein-based bonding agents into a durable substitute for solid oak, creating healthy, sustainable building materials from Kentucky-grown hemp.



Iristrac | *Prospect, KY*

Iristrac provides horse owners with a non-invasive equine identification system using a patented iris scanner, paired with a web platform for storing and accessing horse records — purpose-built for Kentucky's equine industry.



Sunflower Fuels | *Lexington, KY*

Sunflower Fuels produces bio-based feedstocks for the power and refining industries by harnessing underutilized rural land to grow energy crops that extract carbon from the atmosphere while generating new revenue for Kentucky farmers.



Parasight Systems, Inc. | *Lexington, KY*

Parasight Systems offers the world's only push-button fecal egg count system for veterinary clinics, delivering instant imaged results that streamline parasite management for horse and livestock operations across Kentucky.



RedLeaf Biologics | *Lexington, KY*

RedLeaf Biologics combines proprietary plant genetics and extraction processes to develop phytochemical extracts with applications in health, cosmetics, wellness, and nutrition — opening new commercial markets for Kentucky agricultural crops.



Lepidext, Inc. | *Lexington, KY*

Lepidext discovers, develops, and commercializes bioinsecticides that control lepidopteran pests in food and fiber crops, delivering a safer, sustainable alternative to synthetic insecticides for Kentucky producers.



Spirited Biomaterials | *Lexington, KY*

Spirited Biomaterials produces Polyhydroxyalkanoates (PHA), a fully biodegradable plastic substitute derived from agricultural sugars, creating a compostable alternative to petroleum-based plastics rooted in Kentucky's distillery economy.

Challenge Grant Awardees



Round 2: 2024-2025



Santerre International | Paducah, KY

Santerre International converts invasive Asian carp into fertilizer products — a liquid hydrolysate and a solid compost substitute — providing Kentucky's organic farms with affordable, locally produced soil amendments while generating new rural livelihoods.



ORB Technologies | Lexington, KY

ORB Technologies manufactures the Biomie™ bio-composite building block from agricultural residues like grain straw and switchgrass, creating new income streams for Kentucky farmers while positioning the state as a leader in sustainable construction materials.



Kanbol, Inc. | Auburn, KY

Kanbol uses a patented pulping process to transform corn stover — a byproduct of Kentucky's bourbon and row-crop sectors — into compostable food containers, adding value to the farm economy while reducing plastic waste at scale.



Gabby Blocher, CEO



On the impact of the Challenge Grant Program:

"The ability to hire talented people who bring expertise, passion, grit and credibility to us was transformative. It led us to move faster, think bigger and begin scaling in a way that simply wouldn't have been possible without this grant. It bridged the gap between possibility and reality. It gave us the chance to show what can be done here in Kentucky and begin to show the role that the Commonwealth can play in sustainable feedstock production globally."

Building Kentucky's AgTech Ecosystem



Beyond the Challenge Grant Program, BADC invested in building the relationships and public presence that a growing ecosystem requires. Over the founding years, the organization engaged more than 50 external organizations and companies across state government, higher education, capital markets, and national agtech networks — including the Kentucky Department of Agriculture, Kentucky Cabinet for Economic Development, Farm Credit Mid-America, and AgLaunch. BADC pursued active partnership development with higher education institutions to build structured support programming for Challenge Grant awardees. A consistent communications strategy across owned social channels and earned media placements generated more than 80,000+ social media impressions and placed BADC in front of audiences ranging from national economic development publications to Kentucky's agricultural leadership community. The result is an organization with the network and visibility to accelerate Kentucky agtech well beyond what any single grant program could achieve.

50+

Organizations Engaged

80,000+

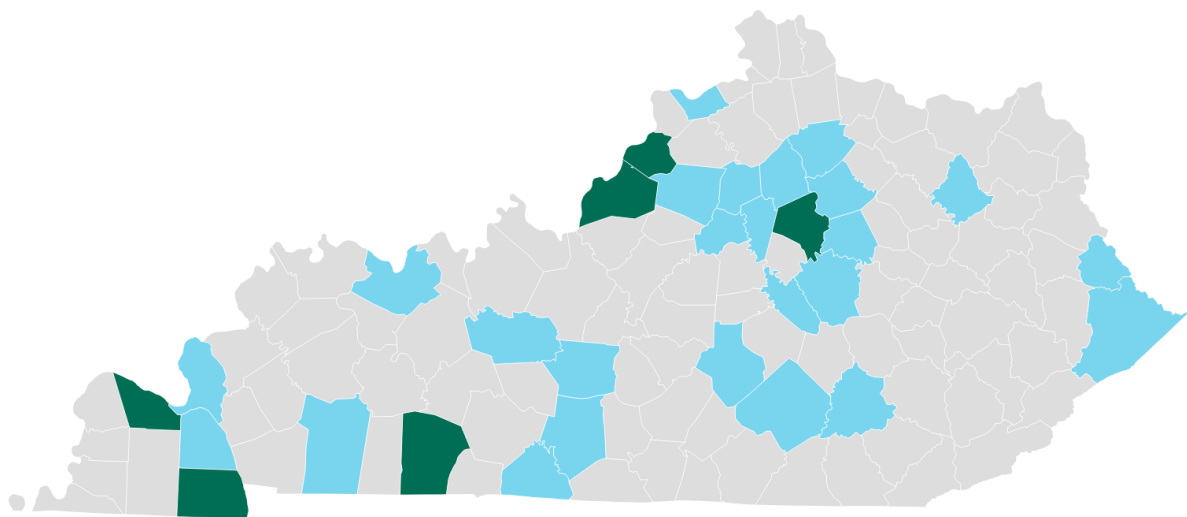
Social Media Engagements

10+

Media & Speaking Events

Bluegrass AgTech Development Corp Challenge Grant Outreach

■ Applicant ■ Award



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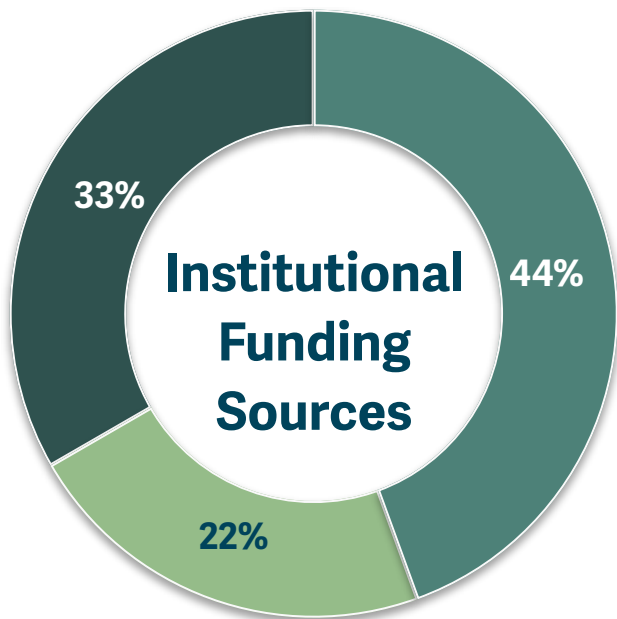
Financial Overview



\$2,250,000

TOTAL INSTITUTIONAL SUPPORT

LFUCG: GRANT FUND \$750,000 | LFUCG: OPERATIONS \$500,000 |
KADF: GRANT FUND \$1,000,000



- KADF - Grant Funds
- LFUCG - Operations
- LFUCG - Grant Funds



LEXINGTON

KADF
KENTUCKY AGRICULTURAL
DEVELOPMENT FUND

GRANT FUND

\$925,000

COMMITTED TO COMPANIES
via Challenge Grant Program

Round 1 · 7 companies \$625,000

Round 2 · 3 companies \$300,000

Grant funds are held in a dedicated account, separate from operations.

OPERATIONS FUND

\$155,318

2023/2024 OPS SPEND
Funded by LFUCG

\$129,039

2025 OPS SPEND
Funded by LFUCG

\$184,352.40

2026 OPS BUDGET
Funded by LFUCG

Looking Ahead



The founding years of Bluegrass AgTech Development Corp established something that cannot be built overnight: proof. Proof that Kentucky agtech companies can win with the right support. Proof that farmers and founders can find common ground when the right infrastructure exists to connect them. Proof that a state-level agtech organization, built with the right partners and a clear mission, can move the needle on one of Kentucky's most important economic opportunities. That proof is the foundation for everything that comes next.

BADC enters its next phase with momentum — a growing portfolio, a deepening partner network, and a Challenge Grant Program that improves with every cycle. The priorities ahead are not a departure from the founding thesis. They are its natural extension: more companies supported, more farmers reached, more capital unlocked, and a more durable organization built to serve Kentucky agriculture for the long term.

01

Challenge Grant Round 3

Our next round of awardees to be selected summer 2026. Round 3 marks BADC's most competitive cycle yet — and the first to reflect a fully refined application and scoring process built on two years of operational learning.

02

Farmer Engagement Expansion

Connecting portfolio companies to more Kentucky farms — and more Kentucky farmers to the tools that improve their operations — is central to BADC's next chapter. We are building the pathways that move agtech from the lab to the field.

03

Ecosystem & Partner Network

The relationships built in the founding years are the foundation for what comes next. BADC will deepen partnerships with higher education, state government, and national agtech networks to create more on-ramps for Kentucky companies and more capital pathways for founders.

04

Sustainability & Long-Term Funding

BADC is committed to building a financial model that extends beyond founding commitments — diversifying revenue, pursuing federal and foundation funding, and demonstrating the return on investment that makes the case for continued institutional support.

Kentucky has the farms, the institutions, the capital, and the talent to become a national agtech leader. BADC exists to make that happen — and the best is still ahead.



Bluegrass
AgTech[™]
DEVELOPMENT CORP

Cultivating agricultural innovation in Kentucky

GET INVOLVED

We are actively seeking partners, investors, and collaborators who share our commitment to Kentucky agriculture and agtech innovation. Reach out to learn about the Challenge Grant Program, partnership opportunities, or how to get involved with BADC.

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