

The James B. Beam Institute for Kentucky Spirits ensures the welfare and prosperity of Kentucky's spirits industry. Through teaching, research and outreach, the Institute promotes economic sustainability, environmental stewardship and responsible consumption.

JAMES B. BEAM
K.Y. INSTITUTE U.S.

 University of
Kentucky

James B. Beam Institute
for Kentucky Spirits

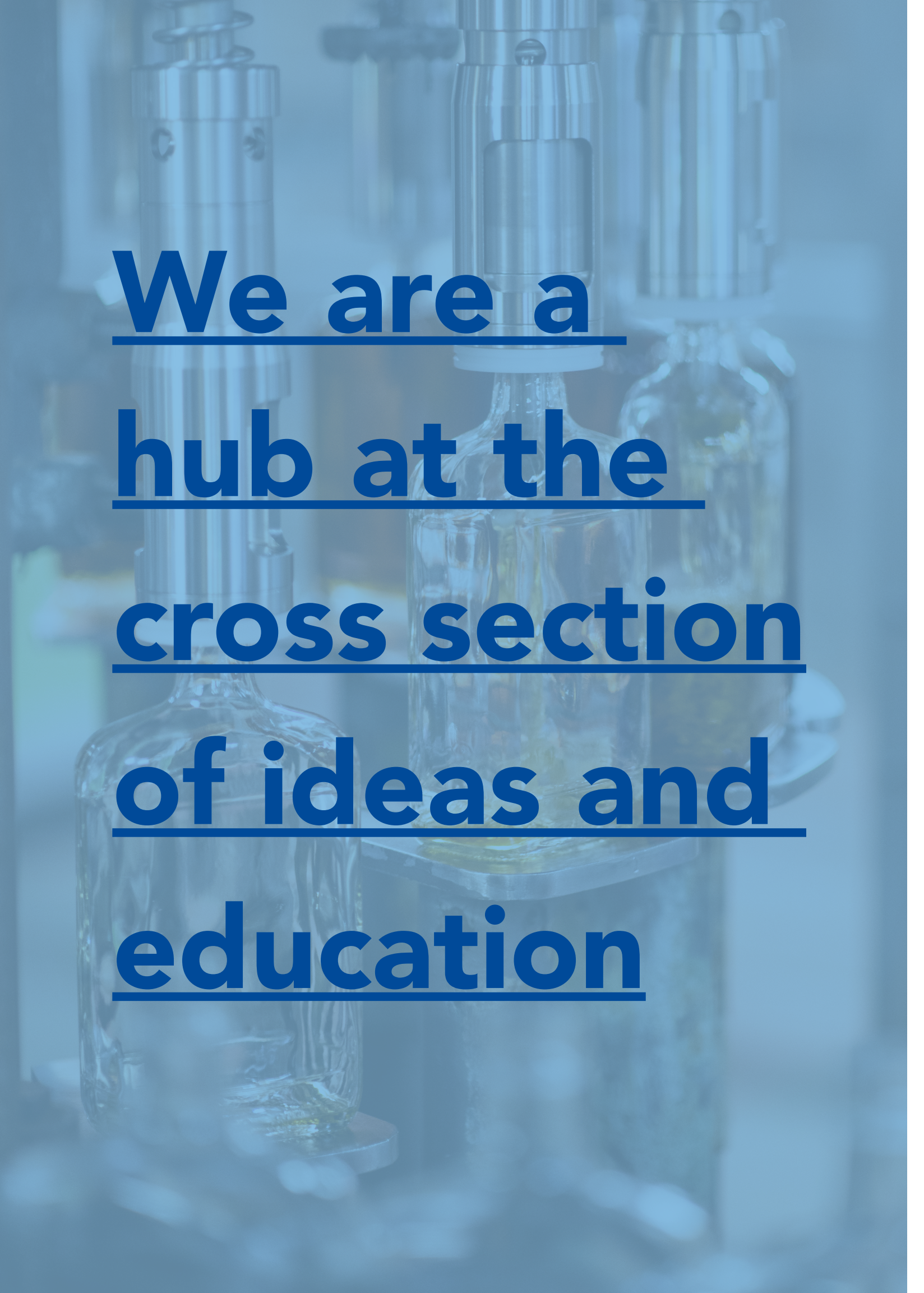
2021 Annual Report

THE BOURBON INDUSTRY'S RESEARCH AND DEVELOPMENT LEADER

The Beam Institute is a leader for Kentucky's spirits industry, creating exceptional teaching and outreach programs, along with multidisciplinary research to ensure sustained competitiveness from farm to product.

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We are a
hub at the
cross section
of ideas and
education

The Beam Institute comprises a multi-disciplinary team of faculty, staff and students from the colleges across the University of Kentucky campus

From the Director

- The University of Kentucky founded the James B. Beam Institute for Kentucky Spirits in 2019 as a first-of-its-kind institution for scientific discovery, to build the necessary infrastructure to support the long-term economic viability and environmental sustainability of American whiskey.

For more than 200 years, the history of American Whiskey has been growing in Kentucky. It is a fascinating history linked to our natural resources of water, grains and oak and to human innovation and creativity. The James B. Beam Institute at the University of Kentucky (Beam Institute) links the land grant flagship university to the state's legacy bourbon industry in research, education and outreach. The Beam Institute supports the global growth and sustainability of the American whiskey industry.

What does this mean in practical terms? It is our belief that emerging challenges today are opportunities for the next generation. As we train the next generation of distillers it is important to reflect on the current evolutions in technology as well as emerging challenges. In this regard, 2021 was no exception here in Kentucky. An ongoing pandemic, substantial growth in capital projects at Kentucky distilleries, supply chain shortages, human resources, spent grains disposal imbalance and climate change dynamics were all at play. These obstacles draw on multiple areas of expertise and it is our goal to train a ready next generation workforce. There were approximately 1000 students in our classes in 2021

and the Distillation, Wine and Brewing Studies certificate reached 150 students. Beyond the existing classes, new classes were formed in Social and Corporate Responsibility in the Distilled Spirits Industry, Terroir of Bourbon, as well as Gin Production. Both distance learning and face-to-face learning models are available to support student needs.

It is exciting to see many of these students taking positions right here in Kentucky as well as reaching all corners of the U.S. from California and Washington State to Connecticut. The current workforce environment is very competitive and ensuring that our students are knowledgeable, practical and collaborative big thinkers is a mission that drives us daily.

In March (14-16) the Beam Institute was proud to host the 2022 Industry conference in person on UK's campus. The

Kentucky Distillers Association was the major conference partner again for 2022 and we are thankful for their continued partnership. I think it is important to reiterate that the Beam Institute represents an open door to the university for a global industry with local roots. The outreach mission of the University of Kentucky is that of service to our communities and state. The Industry Conference is a service opportunity for us and is priced very modestly to allow our craft to largest distilleries to send their employees without a financial burden and to allow the next generation of distillers, the students, to attend. Please continue to come and network, build community and discuss the top issues relevant to Kentucky and American whiskey. This year we welcomed visitors from other countries and all over the United States with an exciting selection of speakers and vendors.

You will find several references to the research activities ongoing in the Institute in this 2021/2022 Annual Report. Things I am quite proud of are the variety of people and colleges actively engaged in research. Thank you to each of the 50-plus Beam Institute Faculty Fellows. There are too many projects to go into in detail but to give you a sense of the



Dr. Seth DeBolt / Director, James B. Beam Institute for Kentucky Spirits

breadth I wanted to mention a few interesting projects.

The Gatton School of Business is engaging with small to mid-sized distilleries that are rapidly growing (which is most of them) and assisting them with strategies that enable smooth workforce planning, logistics and capital projects. The College of Engineering is also working on sustaining economic growth. My favorite example here is where Dr. Steven Schafrik from mining engineering alleviated a corrosion issue from under \$10,000 that had caused complete failure of >300 barrels in a single year on a single level using ventilation technology from his mining expertise. Things like the White Oak Initiative led by Dr. Jeff Stringer in the Forestry department are ensuring the future of our favorite hardwood in the rickhouse, American white oak (*Quercus alba*

L.). The College of Agriculture, Food and Environment is always creating new options for raw materials for distillers, working to facilitate linkages between cattle producers and distillers, creating cocktail gardens for visitor centers and building a distilled spirits sensory science team to assist distillers in this area. There are also really important contributions in the social sciences. Dr. Jan Fernheimer from the College of Arts and Science is our leader in this space. Her essay on Elmer Lucille Allen in *American Whiskey Magazine* is a must read. Furthermore, her work on African American contributions to the American whiskey industry and women in bourbon oral history class are being catalogued, disseminated and taught to the next generation of distillers. A huge thanks to the many distilleries engaged in supporting this research financially and collaboratively.

To conclude, a big reason that the Beam Institute at the University of Kentucky was formed is to provide a top-tier hub at the cross section of ideas and education. The Beam Institute is taking intentional steps to improve our structure, broaden our expertise, extend our influence, and serve our students and community for the long term. Please feel free to reach out to us and become involved as we move forward.

Dr. Seth DeBolt

Director, James B. Beam Institute for Kentucky Spirits

Professor, College of Agriculture, Food and the Environment

The Institute was created with the goal of facilitating the growth of the state's spirits industry and cultivating the next generation of distillers

How do we build on our successes? Collaboration.

- The James B. Beam Institute for Kentucky Spirits strives to carry out pre-competitive research, provide workforce development opportunities and conduct extension and outreach activities that benefit the entire spirits industry. The success of this endeavor relies upon industry-wide engagement, participation and support. If you are interested in finding out more about the benefits of becoming an Industry Member, please contact Dr. DeBolt or Danielle Jostes in the College of Agriculture, Food and Environment's office of philanthropy.



Dr. Seth DeBolt

Director, James B. Beam Institute for Kentucky Spirits; Professor, Department of Horticulture

University of Kentucky

N-318 Ag. Science N.

Lexington, KY 40546

(859) 257-8654

seth.debolt@uky.edu



Danielle Jostes

Interim Director of Philanthropy, College of Agriculture, Food and Environment

University of Kentucky

107 Gluck Research Center,
1400 Nicholasville Road

Lexington, KY 40546

(859) 218-1176

danielle.jostes@uky.edu



We are proof
of the power
of cross-
industry
collaboration

In creating exceptional teaching, research and outreach programs, the Beam Institute is a leader for Kentucky's spirits industry from farm to product

From Beam Suntory

- With the goal of supporting the development of Kentucky's workforce, promoting Kentucky as the production and innovation capital of the bourbon industry, and building effective alcohol awareness initiatives, the partnership between the University of Kentucky and Jim Beam® will champion Kentucky's spirits industry for years to come.

Since partnering with the University of Kentucky to establish the James B. Beam Institute for Kentucky Spirits in 2019, Beam Suntory has continued to build a strategic partnership with the University to make the Institute a reality; an institute dedicated to the advancement of Kentucky's signature industry through research, workforce development, environmental sustainability, community outreach, and social responsibility.

To support this vision, Beam Suntory created a new role, University Relations and Institute Program Director, to link the two organizations. This role is the first of its kind within Beam Suntory and was established to build and maintain a collaborative partnership with the University of Kentucky, create institute recognition and ensure that the Beam Institute serves as a resource to advance the industry. The historic philanthropic gift of \$5M along with a dedicated resource is a testament to Beam Suntory's leadership and long-term commitment to the sustainability and growth of the bourbon industry.

I have had the privilege of stepping into this new role, working directly with Seth DeBolt, Director of the James B. Beam Institute, and other key stakeholders at the

University of Kentucky. Being in such a unique role has allowed me to witness the power of cross industry collaborations. As an academic institution, the Beam Institute is uniquely positioned to assess impacts to the industry, align partnerships and lead collaborations that will sustain and grow the industry.

Creative collaborations through the Institute, such as the White Oak Genome project, will be a key component in developing the next generation of American Whiskey and are at the center of Beam Suntory's long-term commitment to actively contributing to a more sustainable future.

Our workforce development initiatives have been focused on both current and next generation leaders. In summer 2022 we will host our third internship cohort. The Summer Internship Program is geared towards introducing the next generation of leaders to Beam Suntory and the industry. In addition, we kicked off the first ever Whiskey Apprenticeship Program that was co-developed by the Beam Institute and Beam Suntory to instill deeper knowledge and skillset within our Fred B. Noe Distillery operators.

Along with supporting our people, we have been focused on solving systemic issues impacting our operations and,

in many cases, the industry. We have partnered with the Beam Institute and other key contributors to conduct research on barrels, barrel warehouses, spent grains and agricultural sustainability. To elevate our commitment to responsible consumption, Beam Suntory has donated funds to support the University of Kentucky in promoting responsible consumption through the Beam Institute and across campus.

We are passionate about the foundation the Beam Institute has laid for teaching the next generation of distillers and are excited about the future opportunities we can unlock with the support of our industry peers.



Lisa Banner

University Relations and Institute Program Director, Beam Suntory

Members

■ Special note: The James B. Beam Institute Advisory Board will meet in the summer of 2022. Comprising Core Industry Members, the Council of Deans, and Honorary Members, the Advisory Board will provide strategic review and counsel to the Institute, its executive committee and several working groups. If you are interested in joining the board, please contact Seth Debolt (contact information on page 7).

Lead Academic Institution

University of Kentucky

The University of Kentucky is increasingly the first choice for students, faculty and staff to pursue their passions and their professional goals.

For the past two years, Forbes has named UK among the best employers for diversity and for women and Insight for Diversity has annually recognized UK as a Diversity Champion since 2017. Campus Pride gave UK their highest ranking, five stars, for its commitment to LGBTQ-inclusive policy, program and practice.

Overall, UK has earned Modern Think's *Great Colleges to Work For* designation for the past four years.

The University of Kentucky is one of only eight institutions in the country with the full complement of liberal arts, engineering, professional, agricultural and medical colleges and disciplines on one contiguous campus.

"As the University for Kentucky, we are the engine of our state's industry — the pulse of its economy," said University of Kentucky President Eli Capilouto. "When we envisioned ways to prepare our workforce to meet the changing needs of our rapidly growing bourbon industry, a partnership with Jim Beam was a natural fit, and I can't thank them enough for the generous gift that will help bring our vision to life. Together, as the Commonwealth's indispensable institution and the world's number one-selling bourbon, we're inspired by the common goal of maintaining the welfare, prosperity, and sustainability of Kentucky's spirits industry for generations to come."

Founding Member

Beam Suntory

Beam Suntory was created in 2014 by combining the world leader in bourbon and the pioneer in Japanese whisky to form a new company. Headquartered in Chicago with four operations facilities and three main offices in Kentucky, Beam Suntory is a division of Suntory Holdings Limited of Japan. It is parent company to the James B. Beam Distilling Co., producer of the world's number one bourbon and leader in premium bourbon innovation.

Beam Suntory's total brand portfolio includes Jim Beam and Maker's Mark bourbon brands, Suntory whisky Kakubin and Courvoisier cognac, as well as premium brands including Knob Creek, Basil Hayden and Legent bourbon; Yamazaki, Hakushu, Hibiki and Toki Japanese whisky; Teacher's, Laphroaig and Bowmore Scotch whisky; Canadian Club whisky; Hornitos and Sauza tequila; EFFEN, Haku and Pinnacle vodka; Sipsmith and Roku gin; and On The Rocks.

Core Industry Member

Independent Stave Company

Independent Stave Company is a family-owned company that manufactures quality cooperage products for distilleries, wineries and breweries around the world. In addition to domestic cooperage and mill facilities in Missouri, Kentucky, Indiana and Ohio, the company operates facilities in France, Australia, and South America.

Founded by the Boswell family in 1912, Independent Stave Company embraces the core values of family,

innovation, community, and hard work.

“Continuous improvement through research and innovation is a pillar of our company, which makes supporting the James B. Beam Institute a natural fit,” said Brad Boswell, CEO and fourth generation cooper of Independent Stave Company.

“We are excited to work alongside University of Kentucky students as they study the relationship between oak and spirits. The Independent Stave Company – Boswell Family Barrel Warehouse will be an unparalleled, hands-on experience that will drive further innovation in our industry, both today and in the future.”

Key Affiliations

Kentucky Distillers’ Association

The Kentucky Distillers’ Association (KDA) is the first and only non-profit trade association dedicated to protecting Kentucky’s legacy in Bourbon and sharing it with the world. Established in 1880, we bring together distillers, businesses, educators and governmental entities to advocate for our industry and ensure that Kentucky always remains the one true home of Bourbon.

The KDA has been a supporter of the James B. Beam Institute for Kentucky Spirits from its inception and supports the industry conference each year.

Key Affiliations

Scotch Whiskey Research Institute

The SWRI was established in 1974 and has been delivering innovative scientific support to the industry for more than 40 years on all aspects of Scotch whisky production. While SWRI’s primary area of expertise is Scotch whisky, many of the institution’s members have diverse portfolios and interests in other spirit drink categories. As such, SWRI carries out research and provides advice on distilled spirits such as gin, rum, vodka, tequila and non-Scotch whiskeys.

“Distillers in Scotland and Kentucky have strong shared values in heritage, quality and sustainability,” said James Brosnan, director of research for the Scotch Whisky Research Institute. “This gives a firm platform for SWRI and University of Kentucky collaboration where joint research on areas like maturation will benefit our member companies on both sides of the Atlantic.”

Key Affiliations

Distilled Spirits Council of the United States

Through its training academies, DISCUS graduated the first cohorts of Developing Leaders and Executive leaders in 2021. “Available to DISCUS members and non-members alike, both programs are an eight-month commitment consisting of virtual and in-person elements and include a university partner. The executive certificate builds upon leadership skills and develops a participant’s ability to communicate strategy, negotiate skillfully, influence team behaviors and deliver results. The program ensures the right blend of soft skills and a strategic mindset to achieve performance outcomes at participants’ companies.” Both academies have been delivered through Cornell University in 2021, but DISCUS has moved their executive leadership academy to the University of Kentucky’s Gatton College of Business and Economics for 2022 and beyond.

“We are excited to [...] start a new relationship with the Gatton School of Business at the University of Kentucky which is uniquely positioned to provide custom, industry-specific leadership courses that will greatly benefit participants,” said Sarah Fitzmaurice, chief of resource planning and management at DISCUS. “Both universities provide leadership programming empowering participants to apply learnings to daily work and life.”

Steering Committee

University of Kentucky

Dean Nancy Cox
College of Agriculture, Food and Environment

Associate Dean Mark Meier
College of Arts and Sciences

Dean Rudolph Buchheit
College of Engineering

Dean Simon Sheather
Gatton College of Business and Economics

Associate Dean Scott Bauries
J. David Rosenberg College of Law

Beam Suntory

Kevin Smith
Vice President Kentucky Beam Bourbon Affairs

Lisa Banner
University Relations & Institute Program Director

Scott Brooks
Director of Kentucky Maturing Inventory

WN
KENTUCKY
BOURBON
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We are

globally

advancing

the American

whiskey

industry

OWN

Through teaching, research and outreach, the institute promotes economic sustainability, environmental stewardship and responsible consumption

Our Vision and Mission

- The vision of the Beam Institute is to support the global growth and sustainability of the American whiskey industry. Our mission is to make that vision a reality by leading the industry through workforce education, scientific discovery, environmental sustainability, community, and social responsibility.

Academic and Field Research

The research activities at the James B. Beam Institute for Kentucky Spirits are designed to address tangible needs of Kentucky's spirits industry. The unique milieu of the Institute fosters multidisciplinary collaboration with the capacity to address current and future challenges facing the spirits industry. Experts from disparate fields are drawn together with the common goal of maintaining the welfare, prosperity, and sustainability of Kentucky's spirits industry for generations to come.

The Beam Institute constitutes a key point of contact for industry professionals to access information, and Institute researchers are available to the industry for research and development, third party testing and long-term experimental systems.

Workforce Development

The Beam Institute will aim to take the lead in talent development for Kentucky's spirits industry. The Distillation, Wine and Brewing Studies Undergraduate Certificate Program has recently begun offering online options, which are accessible to a broad range of students at UK, across the

state and around the country. In addition, colleges across campus are developing graduate-level certificates that focus on the production of distilled spirits. In offering both traditional and online courses at the undergraduate and graduate levels, the Institute serves college students and provides opportunities for industry professionals to further develop their skills.

Social Responsibility

In partnership with Beam Suntory to further reduce underage drinking and impaired driving through targeted new evidence/research-based initiatives, the University of Kentucky launched several new initiatives this past year.

Traditionally, prevention programs have focused primarily on initiatives aimed at individual behavior change and early intervention. More recent developments have provided an opportunity to examine the underlying factors leading to alcohol misuse as it relates to holistic well-being while considering evidence-based and promising prevention strategies to reduce harmful life-altering behaviors. This approach, referred to as primary prevention programming requires an innovative way of implementing prevention by expanding efforts to focus on a comprehensive

approach to understanding and addressing the underlying determinants of behavioral health such as knowledge, attitudes, and behavior.

Through building additional programs and supports for the Fraternity and Sorority Life Harm Reduction Curriculum, along with primary prevention programming and health campaigns open to all students, we support Beam Suntory's global commitment to reducing harmful consumption of alcohol. This includes the support for evidence-based programs tackling underage drinking and impaired driving on college campuses.

Along with broader responsibility programming available to all UK students, Beam Institute students are required to pass a holistic, evidence-based alcohol responsibility course that will span prevention, intervention, and treatment and recovery as well as their roles as ambassadors of responsible consumption.

Diversity, Equity and Inclusion

A working group with representatives from Beam Suntory and the James B. Beam Institute for Kentucky Spirits is currently formulating the institute's goals and vision for Diversity, Equity and Inclusion.



Faculty Fellows and Institute Coordination

■ Visit beaminstitute.ca.uky.edu/content/become-faculty-fellow to apply to become a Faculty Fellow, or contact Ilka Balk, ilka.balk@uky.edu.

Faculty Fellows

College of Agriculture, Food and Environment

- Akinbode A. Adedeji, Associate Professor, Biosystems and Agricultural Engineering
- Tyler Barzee, Assistant Professor, Biosystems and Agricultural Engineering
- Donald Colliver, Professor, Biosystems and Agricultural Engineering
- Mark Coyne, Professor of Soil Microbiology, Plant and Soil Sciences
- Czarena Crofcheck, Professor, Biosystems and Ag Engineering
- Seth DeBolt, Director, James B Beam Institute for Kentucky Spirits
- Allan Bruce Downie, Professor, Horticulture
- Jarrad Gollihue, Post-Doctoral Scholar, Biosystems & Agr Engineering
- John H. Grove, Professor, Plant and Soil Sciences
- David Hildebrand, Professor, Plant & Soil Sciences
- Vanessa P. Jackson, Department of Retailing & Tourism Management
- Tomo Kawashima, Assistant Professor, Plant and Soil Sciences
- Chad D. Lee, Director, Grain and Forage Center of Excellence, Plant and Soil Sciences
- John M. Lhotka, Associate Professor of Silviculture, Forestry and Natural Resources
- Luke Moe, Associate Professor, Plant and Soil Sciences
- Melissa Morgan, Associate Professor, Department of Animal and Food Sciences; Director of the Food Systems Innovation Center
- Jacob Muller, Forestry and Natural Resources
- Sue E Nokes, Associate Dean for Faculty Affairs and Facilities (UK College of Engineering) and Professor, Biosystems and Agricultural Engineering
- Thomas Ochudho, Forestry and Natural Resources
- Robert R. (Bob) Perry, Agriculture Project Manager/Chef in Residence, Dietetics and Human Nutrition
- Sharyn Perry, Professor, Plant and Soil Sciences
- Michael Sama, Associate Professor, Biosystems and Agricultural Engineering/Electrical & Computer Engineering
- Jeffrey W. Stringer, Professor and Chair, Forestry and Natural Resources
- Surendranath Suman, Professor, Animal and Food Sciences

- Lisa Vaillancourt, Professor, Plant Pathology
- Shuoli Zhao, Assistant Professor, Agricultural Economics

College of Engineering

- John Balk, Associate Dean for Research and Graduate Studies, Professor of Materials Science
- Brad Berron, Associate Professor of Chemical Engineering, Department of Chemical and Materials Engineering
- Rudolph Buchheit, Dr. Rebecca Burchett Liebert Dean of Engineering, Department of Chemical and Materials Engineering
- Regina Hannemann, Senior Lecturer, Electrical and Computer Engineering
- Anastasia Hauser, Lecturer, Chemical and Materials Engineering
- Jiangbiao He, Assistant Professor, Principal Investigator, Lab Director, Electrical and Computer Engineering
- J. Tom Henninger, Senior Lecturer, Mechanical Engineering
- Alexandre Martin, Professor, Mechanical Engineering
- Lindell Ormsbee, Director, Kentucky Water Resources Research Institute, Kentucky Water Resources Research Institute
- Savio Poovathingal, Assistant Professor, Mechanical Engineering
- Stephen Rankin, Professor, Chemical and Materials Engineering
- Steven Schafrik, Associate Professor, Mining Engineering
- Brent Seales, Professor, Computer Science
- Sarah Wilson, Assistant Professor, Chemical and Materials Engineering

College of Medicine

- Luke H. Bradley, Chellgren Endowed Professor & Acting Chair, Department of Neuroscience
- Michele Staton, Professor, Department of Behavioral Science

James W. Martin School of Public Policy and Administration

- Rajeev Darolia, Associate Professor, Public Policy and Economics

College of Health Sciences

- David "Travis" Thomas - Associate Professor, Athletic Training and Clinical Nutrition

College of Design

- SK O'Brien, Assistant Professor, Department of Product Design

Gatton College of Business and Economics

- John Peloza, Associate Dean for Research, Vernon and William Smith Professor of Marketing

- Brad Patrick, Executive in Residence, Management
- Simon Sheather, Dean and Truist Endowed Chair in Data Analytics, Gatton College of Business and Economics

College of Arts and Sciences

- Janice Fernheimer, Zantker Professor and Director of Jewish Studies; Professor of Writing, Rhetoric, and Digital Studies; Jewish Studies
- Alan Fryar, Professor, Earth and Environmental Sciences
- Michael Matthew McGlue, Pioneer Natural Resources Endowed Professor, Earth and Environmental Sciences
- Arnold Stromberg, Professor, Statistics
- Edward W. Woolery, Professor and Chair, Department of Earth and Environmental Sciences
- Junfeng Zhu, Geologist V, Kentucky Geological Survey

External Faculty Fellows

- Harmonie Bettenhausen, Director of the Hartwick College Center for Craft Food & Beverage
- Michael Crowder, Associate Provost and Dean of the Graduate School; Interim Vice-President of Research and Innovation; Professor of Chemistry and Biochemistry, Miami University, Oxford, Ohio
- Kurt A. Rosentrater, Associate Professor, Agricultural and Biosystems Engineering / Executive Director, Distillers Grains Technology Council, Iowa State University
- Stuart Williams, Associate Professor, Department of Mechanical Engineering, University of Louisville

Institute Coordination

University of Kentucky

- Director: Seth DeBolt, College of Agriculture, Food and Environment
- Research Director: Brad Berron, College of Engineering
- Associate Director: Ilka Balk, James B. Beam Institute for Kentucky Spirits
- Technical Director: Jarrad Gollihue, James B. Beam Institute for Kentucky Spirits
- Training Director: Glenna Joyce, James B. Beam Institute for Kentucky Spirits
- Interim Philanthropy Director: Danielle Jostes, College of Agriculture, Food and Environment
- Communications Director (interim): Hayley Pierce, College of Agriculture, Food and Environment
- Social Responsibility Director: Ashley Hinton-Moncer, Campus Recreation and Wellness

Beam Suntory

- Lisa Banner, Organizational Change Management, Strategic Projects
- Blake Layfield, Senior Manager, Applied Technical Research
- Tyler Gomez, MIT Special Projects Lead
- Kendall Arnett, Senior Manager, Global Supply Chain Communications



We are giving
students
irreplacable
hands-on
experience

With both a graduate and undergraduate focus, the institute serves students and provides opportunities for industry professionals to develop their skills

Intern Spotlights & Scholarship

- From distillery improvement, to research and development, to engineering, University of Kentucky students had hands-on experience thanks to internships facilitated by the institute

Kelly Mattingly

Treasury intern
with Brown-Forman

Kelly has worked as a Treasury intern with Brown-Forman for about a year.

"It has been an amazing opportunity to learn from such a knowledgeable team and an honor to work at a company with an incredible culture. During my time at Brown-Forman, I have developed a better understanding of financial risk management, cash management, and bank relations. I am looking forward to furthering my understanding of treasury operations in the coming months and playing a part in Brown-Forman's continued success."



Savannah Lewis

Process Controls intern
with Beam Suntory

"I've been with Beam Suntory since June 2021 as a Controls Engineer intern to optimize the water purification process. The distillery is currently using one main reverse osmosis (RO) water purification controls system and I have been working on implementing two other RO systems, like the main, to decrease waste production and increase water usage in processing. Through this project, I get experience in manufacturing, project management, project design, PLCs and programming but most importantly bourbon."

I really feel like I've gotten so much hands-on experience and leadership in this position because they trust me to lead this project and learn as I go."



The Hank and Kathy Thompson Scholarship Fund

The Hank and Kathy Thompson Scholarship Fund was created specifically to aid University of Kentucky students pursuing studies and careers in the spirits industry.

The Thompsons graduated from UK in 1971. Hank Thompson's father managed three distilleries in Frankfort, so he grew up in the industry. They wanted to find a way to honor his father's legacy.

"We've always had a soft spot in our hearts for the distilling business in Kentucky," Hank Thompson said. "As we approached the time in our life that we were able to start giving back, we approached UK through the Alumni Association to see how we could help students with the same passions about the spirits industry that we share."

The most recent recipient was Jill Steffen (Chemical Engineering). The 2021 recipient was Alexa Narel (Food Science), and the inaugural recipient in 2020 was Tyler Thompson (no relation to Hank and Kathy Thompson).



If you are interested in collaborating with the Beam Institute on a research project, please contact Brad Berron at brad.berron@uky.edu

Notable Research

■ In addition to the projects highlighted below, the institute is engaged in numerous collaborations with industry partners across the state.

The Women in Bourbon Oral History Project

“The Women in Bourbon Oral History Project” aims to fill a gap in both scholarly and popular attention to the many women who play a key role in Kentucky’s \$8.6 billion dollar bourbon industry (KDA). Though Fred Minnick’s *Whiskey Women* (2013) focuses on women’s role in the development of whiskey, bourbon, and Scotch, it is the only history to do so and does not focus solely on bourbon. While several women have authored bourbon/whiskey books themselves, (Peachee, Reigler, Ruffenach, Carlton, Greene, Stevens and Reigler) none focus explicitly on women’s role in the industry. Advancing much needed work in diversity, equity, and inclusion, this project documents the extensive record of women who have helped shape the bourbon industry and the culture of bourbon that surrounds it. The project will include a variety of women’s voices representing multiple perspectives (including but not limited to Black women and other women of color), and was established by Dr. Janice W. Fernheimer in partnership with Dr. Doug Boyd, director of the University of Kentucky’s Louie B. Nunn Center for Oral History, the James B. Beam Institute for Kentucky Spirits, and advanced students in Bourbon Oral History.

This project was launched in conjunction with students enrolled in WRD 569/HIS 595 Bourbon Oral History in Spring 21 and builds upon the successful model of student research developed with the Jewish Kentucky Oral History Project. This model trains both undergraduate and graduate students in professional oral history methods while providing them with access to leading women in one of the most lucrative industries in the Commonwealth; the chance to make history each time they conduct an original interview; and opportunities to publicly present their original research.

During the Spring 2021 semester, 22 original oral histories were conducted by Dr. Fernheimer and Bourbon Oral History students. External funding from the H. H. Shufeldt Whiskey Company supported professional transcription of the interviews. Over summer 2021, three undergraduate researchers worked to create digital indexes using the Nunn Center’s cutting-edge Oral History Metadata Synchronizer (OHMS). They also worked on research, scripting, and pre-production of a forthcoming episode of the *Wisdom Project* podcast. The indexed interviews can be accessed online. The project recently received \$12,000 in UNITE funding to support the collection and indexing of 15 additional interviews with Black Women in the Bourbon industry during 2022-2023 and welcomed Dr. J Wells to the team of faculty researchers.

Over the next 3-5 years the project aims to collect a minimum of 100-150 interviews with female industry leaders.

White Oak Genome

Maker’s Mark and the University of Kentucky are establishing the world’s largest repository of American white oak. The massive effort at Star Hill Farm, home to Maker’s Mark Distillery, represents the most comprehensive natural range of white oak to date anywhere in the world. The repository is part of a larger mission to transform the conservation of a species critical to many American industries, including Kentucky bourbon, and to prioritize the present and future of forests and rivers.

Laura DeWald, UK Department of Forestry and Natural Resources tree improvement specialist, is leading a project collecting more than 300 unique families of white oak from across the United States to plant at Star Hill Farm. The first planting took place on April 15, 2021, and successive plantings over the next several years will result in the largest single white oak genetic repository in the United States. This repository will provide the foundation for research and tree improvement to address current and future threats to white oak trees and the millions of acres of forests they dominate. It will also support white oak-dependent industries that contribute billions of dollars to rural and urban economies across the region.

This work is the second phase of an unparalleled collaboration between UK and Maker’s Mark, which also includes the world’s first comprehensive effort to map the white oak genome. Working with Maker’s Mark and the cooperage Independent Stave Company (ISC), the UK team is studying the genetics of the mother tree, called “MM1” at Star Hill Farm, which is one of the oldest white oaks in Kentucky. It has been exposed to incredible climate variations and is estimated to be 300 to 500 years old. Data from this study will give UK, ISC and Maker’s Mark information about the longevity, disease resistance and vitality that American white oak can offer to the bourbon industry and beyond.

“This collaboration, the combination of the white oak genetic fingerprint and the germplasm planted solely at Star Hill Farm, will allow us to prepare for any future risk to this organism. In simple terms, if a risk arises, we can look for examples of natural variation within the germplasm that can tolerate new pests or even different climates. Maker’s Mark is absolutely leading the way in the bourbon industry when it comes to looking at the sustainable future of the natural

resources used to make bourbon. If other threatened species had this level of support, we would have a huge leg up in protecting our ecosystems," said Seth DeBolt, Director of the James B. Beam Institute for Kentucky Spirits.

The partnership between UK and Maker's Mark is part of the joint vision to protect and sustain natural resources by not only supporting the white oak forest, but regenerating forest production with healthy, sustainable and superior trees.

KY Industrial Assessment Center Work to Reduce Distilleries' Energy Costs

UK's Industrial Assessment Center (IAC) conducted five energy assessments for the bourbon industry over the past 18 months led by Drs. Don Colliver and Tom Henninger. The IAC team of faculty and engineering students evaluated each distillery during a one-day onsite visit as the team searched for potential savings in the use of electricity, natural gas, and water/sewage. The average savings identified per assessment was \$392,000 or 10.5% of annual utilities of each distillery. The average payback period for each distillery to implement the recommendations was 2.3 years.

Multi-faceted and multi-disciplinary spent grains work in collaboration with Team Kentucky, the KDA, and researchers across the University of Kentucky

The University of Kentucky's James B. Beam Institute for Kentucky Spirits is conducting several studies to help figure out how to use spent grain.

In the fall of 2021, the Beam Institute partnered with the Kentucky Distillers' Association, Team Kentucky Cabinet for Economic Development, Distillers Grain Technology Council, KY INNOVATION, Kentucky Energy and Environment Cabinet and Innovation Incubated to sponsor the Distillers Grains Reverse Pitch. Through this effort, the collaborators sought new and innovative technologies and solutions from problem solvers, inventors, entrepreneurs and businesses to expand uses of stillage.

The pitch contest's six finalists from across the country were tasked with offering a sustainable solution to the more than 1 billion gallons of stillage produced by Kentucky's distillers as the industry continues to grow.

The winning pitch by Louisville-based BioProducts LLC offered an integrated solution to stillage. BioProducts, founded by CEO Jagannadh Satyavolu, partnered with C&I Engineering Inc., another Louisville company, for its pitch. Satyavolu said by using whole stillage, which is mostly water, there's an opportunity to produce at least three profitable products. One of those is activated carbon, which is the preferred electrode material in supercapacitors, asymmetric batteries and a variety of advanced batteries because of its high surface area and high purity.

More conventionally, livestock producers have been primary users of stillage for feeding their herds. Larger distilleries have invested in equipment to dry out whole stillage and make

it more portable, but smaller craft distillers don't always have the funds for that. Feeding stillage wet replaces some of the water cattle would normally drink. It's a great source of protein and energy for cattle. However, whole "stillage contains nearly 93% water making it a challenge to transport and feed," Jeff Lehmkuhler, beef specialist in the UK College of Agriculture, Food and Environment, said. "It is too costly to haul water down the road and whole stillage is a locally available feed resource. In many instances, this is problematic as distilleries are constructed in urban areas with few cattle nearby to utilize the stillage as feed."

The fuel ethanol industry and larger bourbon distilleries have invested in driers allowing the dried product to be a marketable feedstuff across the United States and beyond.

"Additional research is needed to increase our understanding of how stillage may impact fermentation in the rumen and overall animal health allowing us to refine feeding recommendations to the beef industry in the region," Lehmkuhler commented.

Don Colliver is the director of the Kentucky Industrial Assessment Center, housed at UK. His team has been working to determine how energy flows through distilleries. "In particular, we are looking at various ways of processing the stillage, or that material that comes out of the bottom of the still," said Colliver, who is also a professor of biosystems engineering in the UK College of Agriculture, Food and Environment. "We have conducted energy audits at six distilleries and identified ways that they might be able to save energy."

Rodney Andrews is the director for the UK Center for Applied Research and a professor of chemical engineering. The center has a strong program in carbon materials research. They are actively studying stillage solutions. "We are looking at converting stillage through a process called hydrothermal conversion," Andrews said. "Basically, you're heating the stillage under pressure, and it will rearrange itself into what's called 'char' and at that point, it's really not stillage anymore. It becomes a very high-carbon product that can be used by itself or further processed into porous or conductive carbons."

Andrews said the center is working with Carbon Science Solutions, a company that has optioned the technology, and several distillery partners to explore products that can be made from hydrothermal conversion. "There's a wide range of products we are looking at, including those that would aid in purification, cleaning up a water stream, product stream," he said. "Other products could be used for energy storage if they are high-purity carbons. There is also implication for agriculture and building materials. We have so much to explore."

Brad Berron, Research Director of the James B. Beam Institute for KY Spirits and Chemical Engineering Professor at UK, said he believes the best solutions will come from collaboration and they will be diverse. "We will likely end up with many answers and have some kind of interconnected web of stillage solutions," he said. "Research within the university is already very multidisciplinary and comes from many colleges across campus. We are really looking forward to the submissions and we can't wait to work with these folks and share our work with the state's distilleries. Every spirit has a byproduct and this competition will elevate the technology and our capability to solve the issue in ways that will fit all kinds of productions scenarios."



We are

preparing the

next generation

of industry

experts

The Beam Institute is committed to elevating education and research in order to support the development of Kentucky's spirits industry workforce

Alumni Spotlight

- Students who benefitted from institute classes and internships have now transitioned to making their mark on the bourbon industry as full-time employees

Jenna Dowell

Fred B. Noe Craft Distillery



"I attended the University of Kentucky where I earned my B.S. in Chemical Engineering and my MBA. During my undergraduate degree, I was able to complete several of the Distillation, Wine, and Brewing Studies (DWBS) courses, such as Bourbon Production Engineering and Brewing Science & Technology. These were definitely some of my favorite classes, since they applied directly to my career interests.

I have worked with multiple distilleries in the state, including two years with the James E. Pepper Distillery, where I interned and worked as a distiller. I also had the opportunity to work as a packaging quality specialist with Wild Turkey Distillery. In January 2021, I moved to my current role as a craft distillery supervisor at the James B. Beam Distilling Company's newly built Fred B. Noe Craft Distillery.

At the Fred B. Noe Craft Distillery, we distil small batch products and have a focus on research and innovation. For months I stared at P&IDs and drawings of the distillery, so it was really amazing to watch the progress of the building and see it all come to life. I've already attained an abundance of knowledge from everyone at Beam Suntory. I'm glad to be a part of it all and curious to see what new innovations we craft."

Alexa Narel

E. & J. Gallo Winery



Alexa graduated in May of 2021 with a degree in Food Science, while also completing an internship with the James E. Pepper Distillery in Lexington. Since then, she has moved on to an internship with E. & J. Gallo, the largest wine producer in the United States, within their Winegrowing Research department. In particular, she works in the Research Winery,

where a unique small-scale production setup allows for the company to carry out fermentations without launching them on a full commercial scale. These fermentations are studying a variety of factors such as novel yeast, heat wave mitigation, harvesting techniques, tannin adjustments, hybrid plant varieties, and much more. Alexa's project is specifically focusing on co-fermentations of a red varietal with different white varietals to drive product differentiation.

Alexa made it clear that her success within the beverage industry would not have been possible without the opportunities, coursework, and scholarships offered by the James B. Beam Institute for Kentucky Spirits. She didn't realize her passion for the industry until her internship with Pepper, which was only made possible through the Institute's connections. It was also after taking Dr. Barrett's course in Wine Appreciation that she found herself interested in the wine industry and applied to work for E. & J. Gallo.

Going into the industry with background knowledge from the coursework made the transition as seamless as possible and allowed her to grow even more by focusing on the company's work rather than taking time to learn the fundamentals.

Alexa is a post-graduate intern at E. & J. Gallo Winery in the research winery department.





James B. Beam Institute for Kentucky Spirits Technical Director Jarrad Gollihue and Food Science senior Kimberly Lopez-Torres checked out a still for distilling her gin recipe in the GEN 300- Distilled Spirits Production class at RD1 Spirits.

Teaching Highlights

- In offering both traditional and online courses at the undergraduate and graduate levels, the Institute serves college students and provides opportunities for industry professionals to further develop their skills.

James B. Beam Whiskey Apprenticeship Program

The James B. Beam Institute for Kentucky Spirits, in partnership with the James B. Beam Distilling Company, has established the James B. Beam Whiskey Apprenticeship Program, a first-of-its-kind premier whiskey workforce educational program certified by the Kentucky Department of Labor. Thirteen employees at the James B. Beam Distilling Company are pioneering the program as they stand-up the Fred B. Noe Craft Distillery in Clermont, Kentucky, which started production in August of 2021.

"The Beam Institute is all about educating our next generation of distillers, and this is an important part of that work that I'm honored to support," said Freddie Noe, 8th

Generation Master Distiller, Fred B. Noe Distillery. "My grandfather always said that there was no substitute for real-world learning, and we're proud to offer that at the Fred B. Noe Distillery."

Apprentices will benefit from a holistic education that blends on-the-job training with coursework from University of Kentucky professors.

"It's been a wonderful opportunity to coordinate this program and teach these apprentices," said Glenna Joyce, distilling educational coordinator for the Beam Institute and distillery science instructor. "These apprentices are excited to learn and they have insightful questions."

Freddie Noe and Michael Voils, Fred B. Noe (FBN) Distillery Manager developed the idea for the apprenticeship program after a visit to Suntory Yamazaki Distillery.

Freddie and Michael had a hands-on approach in developing the curriculum with the University of Kentucky, which includes safety, bourbon grains, bourbon engineering, fermentation, public speaking and customer relations, sensory, maturation and distillery science.

“It was important to include distillery engineering and deeper chemistry knowledge for our apprentices,” said Noe. “We have sharpened our skills in the art of bourbon making over the past 200 years and linking the art and science of it at the ground level is an important part in crafting premium expressions.”

The James B. Beam Whiskey Apprenticeship program entails 200 hours of customized coursework for operators. The first class of apprentices will finish their course work July 2022. Apprentices Jerry Cunningham and Ty Stivers share their stories:

Jerry Cunningham

“I have worked at Jim Beam for 17 years. My experience at Beam has helped me to take on the task of being a craft whiskey apprentice. For ten years I held a distillery relief operator job and for seven years I was involved in boiler operations. As a relief operator I was responsible for operating the still room as well as the dry house, granary, and water plant. This experience has been helpful and a catalyst for engaging in this apprenticeship. I look forward to a more in depth understanding of what crafting the highest quality bourbon really entails.” *(Edited for clarity and brevity.)*

Ty Stivers

“I’ve been working with Beam for 16 years. I started as a temporary employee, then got hired to work in bottling. I also worked in the warehouse. I got involved with the apprenticeship program because I thought it would be a great learning opportunity. It’s really cool to see all the science involved with the process from start to finish. I work with an awesome group of people, I enjoy working in the FBN new cistern room. I’m looking forward toward learning more from the public speaking and customer relations course.” *(Edited for clarity and brevity.)*

Gin Production Class

Making bourbon is not a quick process. It takes years after distillation to taste the final product. Students in the University of Kentucky’s Distillation, Wine and Brewing Studies program don’t have years to wait, so professors and industry partners are teaching them to make gin. Students can produce gin in one semester from concept to bottle.

“Making gin allows us to give students some freedom in creativity, while still teaching them about distillation,” said Jarrad Gollihue, technical director for the James B. Beam Institute for Kentucky Spirits. “RD1Spirits approached us about partnering in a hands-on educational experience and we decided on this gin production class.”

Gin does have a period where it needs to rest a bit before it’s ready for consumption, but Gollihue said that time is much shorter than the multiple years that bourbon requires.

Meeting weekly at RD1’s William Tarr Distillery in Lexington, students crafted their own vision and recipe using a variety of botanicals. Juniper berries are required, but beyond that, students were able to choose from many additional ingredients. The students conducted a sensory panel to decide which recipe they would use to scale the product. RD1 representatives also provided business insight to give students an idea of what consumers would buy.

One student’s recipe and vision rose to the top. Kimberly Lopez-Torres is a senior food science major in the UK College of Agriculture, Food and Environment. A native of Mount

Sterling, she’s also pursuing the Distillation, Wine and Brewing certificate.

“Gin is one of those alcohols I was honestly not familiar with,” she said. “Having more experience in learning what it is and how it differs from others (spirits) was interesting. My classmates found that my gin was pretty applicable to all our demographics. I decided to do something a little more traditional and then added some spices not usually found in gin to give it a Kentucky twist.”

Lopez-Torres said Kentucky’s southern hospitality has always had an impact on her life, so she wanted to make something that embodied all of that.

Social Responsibility Class

Students enrolled in the Beam Institute – Distillation, Wine, and Brewing Studies Certificate were invited to attend the Social Responsibility Course learning the following curriculum as proposed to Kentucky Distillers Association:

1. Understanding Socio-Ecological Model, Social Consciousness, Corporate and Social Responsibility
2. Understanding Prevalence and Impact of Substance Use Disorder
3. Behavior Change Theory & Determinants of Health
4. Harm Reduction, Primary Prevention, and Impacts of alcohol misuse
5. Harm Reduction continued Alcohol Skills Training Program (ASTP)
6. Intervention, Treatment & Recovery
7. Overview of opportunities, challenges, and resources related to Intervention, Treatment & Recovery
8. Collegiate and Community Resources for Treatment and Recovery
9. TIPS Training (2 hours)
10. Next Steps and Your Role in supporting social responsibility

Summer Course on Bourbon Production Engineering

The Bourbon Production Engineering course was offered online during the summer of 2021 allowing students to learn about the bourbon production process, with an emphasis on the connection between chemical engineering and the bourbon industry. Each week, two guest speakers attended the course and provided students with their expertise on the industry. Guest speakers included Shane Baker (Wilderness Trail Distillery), Brad Berron (James. B. Beam Institute for Kentucky Spirits), Dave Carpenter (Deutsch Family Wine & Spirits), Alex Castle (Old Dominick), Nick Eimers (Buffalo Trace), Devin Mills (BoozeWerks), Shawn Otto (Beam Suntory), Struan Reid (Lallemand) and Sean White (Wild Turkey). Additionally, the course hosted a session with human resources representatives from Beam Suntory, Brown Forman, Heaven Hill and Sazerac so that students could learn about the key skills required for working in the bourbon industry.

The course was taught by Dr. Sarah Wilson and Dr. Anastasia Hauser in UK’s Chemical and Materials Engineering Department, and is again being offered in the summer of 2022.



The designs for the new James B. Beam Institute Facility on UK's Agricultural Campus are underway. The facility will be constructed on the corner of Cooper Drive and Nicholasville Road.

Institute Facility

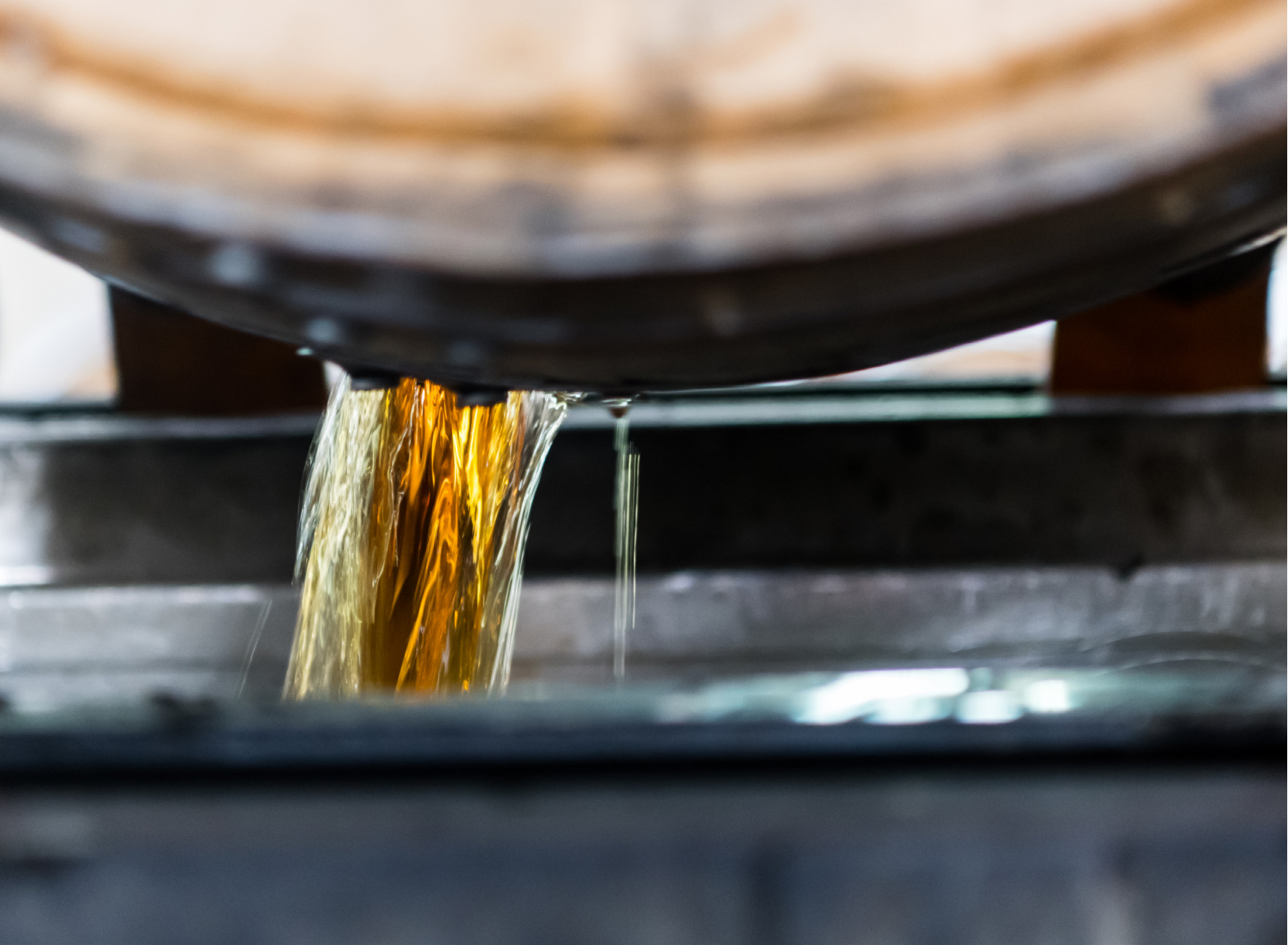
■ A new facility containing a still house, classroom, office spaces, and an analytical laboratory is under construction alongside a 600-barrel maturation warehouse on the University of Kentucky's south campus.

- Summer 2020 – Architects chosen for facility design
- Winter 2021-22 – General Contractor chosen through UK's bidding process
- Spring-Summer 2022 – Groundbreaking
- Summer 2023 – Grand Opening



Pictured above: An external view of the Independent Stave Company – Boswell Family Maturation House. Right: An internal view of the maturation house.





The institute has benefitted in incredible ways since its beginnings thanks to generous donations from our spirits industry partners.

Donations

- Generous gifts from Vendome Copper and Brass Works and JCS Process and Control will enable students now and in the future to conduct cutting-edge, impactful research on behalf of the American spirits industry.

Vendome Support for Teaching and Research

Having a working distillery on campus at the University of Kentucky will help train the next generation of distillers and spirits' industry professionals.

In early 2021, Vendome Copper and Brass Works pledged its support to UK's James B. Beam Institute for Kentucky Spirits to be part of that mission with the Vendome Copper and

Brass Works Distillery Support Fund.

"We are very excited and appreciative to have the opportunity to be a part of UK's James B. Beam Institute for Kentucky Spirits. The distilling industry is very dear to our hearts," said Barbara Sherman, vice president for Vendome Copper and Brass Works.

"Vendome was founded in 1903 serving this industry, and today we still provide equipment to distilleries throughout Kentucky, the United States and worldwide."

The distillation industry is an important part

of Kentucky's economy, and the Beam Institute is training students to enter distillation, wine and brewing careers.

"We are grateful for this contribution from Vendome," said Brad Berron, director of research for the Beam Institute. "Their team is the most knowledgeable in the bourbon business, and they've been sharing that expertise with us ever since we started the Beam Institute. This gift will allow our students to continue to learn from Vendome's experts, as UK students study the science, engineering, and art required to create world-class bourbon."

The Vendome team has already been collaborating with the Beam Institute by working with current students to contribute to the design process of the institute's facility. Berron said Vendome's engagement has already provided some incredible learning opportunities for the students in the Distillation, Wine and Brewing Studies certificate program. UK students Dylan Shoulders, Emily Smith, Nick Eimers and Will Hubbuch have all contributed to the design of the institute's new facility.

"It is very important for this and future generations to be educated in an industry that is such an important part of Kentucky's economy," Sherman said.

JCS Process and Control Systems UltraBlend™ System Donation

The strength of bourbon coming out of the barrel is significantly higher than most products on the shelf. To lower the alcohol content, bourbon is traditionally held in a tank, weighed, measured for alcohol content and then gradually diluted with water to the desired product strength. JCS Process and Control is donating their UltraBlend™ system to the James B. Beam Institute for Kentucky Spirits at the University of Kentucky to simplify and automate this blending process while meeting demanding regulatory standards.

"JCS is thrilled to be able to coordinate the donation of this system with our component partners, for the advancement of research in the bourbon industry," said David Stoklosa, JCS vice president of sales and marketing. "We look forward to seeing students and manufacturing professionals in the industry take advantage of the productivity and time savings advantages this system provides in comparison to traditional batching."

The UltraBlend™ system is traditionally used to standardize enzymes in milk. The Alcohol and Tobacco Tax and Trade Bureau approved the technology for the spirits industry to continuously blend alcohol to a bottling filler without using a bottling tank for proof verification or correction. The UltraBlend™ system will provide tight control in blending high-proof spirits to plus or minus .03 alcohol by volume.

"This equipment will enhance our ability to immerse our students in the ongoing modernization of the distilled spirits industry," said Brad Berron, Beam Institute research director.

"This gift significantly extends our ability to conduct impactful research aimed at increasing productivity and efficiency industrywide. Students from across UK's campus will be trained by our faculty experts on these new technologies and their integration into traditional bourbon production processes. The UltraBlend™ system offers a unique platform for UK's students to study complex mixing phenomena, process controls and automation."

"These are the sort of partnerships that make a difference to the bottom line and can help with efficiency within a distillery," said Seth DeBolt, UK horticulture professor and director of the Beam Institute.



Save the date for the fourth annual James B. Beam Institute Industry Conference, March 13-15, 2023. Find more at beam institute.ca.uky.edu.

Industry Conference

■ After hosting the 2021 conference virtually due to COVID, the James B. Beam Institute for Kentucky Spirits returned to an in-person conference in March 2022. More than 600 industry and academic representatives gathered at the University of Kentucky for the 3rd annual industry conference.

During the three-day conference, more than 100 speakers presented in 17 sessions that spanned the entire spectrum of the distillation industries.

Kentucky Governor Andy Beshear, Kentucky Commissioner of Agriculture Ryan Quarles, as well as UK College of Agriculture, Food and Environment dean Nancy Cox welcomed attendees along with Independent Stave president Brad Boswell and Eric Gregory, president of the Kentucky Distillers' Association. Highlights included a master distillers' lunch panel, an in-depth look at the newly opened Fred B. Noe Craft Distillery in Clermont, from ideation to ribbon cutting, and a diversity, equity and inclusion panel. Day two of the industry conference emphasized sustainability, from growing white oak and utilizing spent grains, to agave production and farmland preservation. A panel by the Kentucky Cabinet for Economic Development capped off the day.



(Left to right) Jacquelynn Russell, Victoria Russell, Victoria Butler, Kate Jerkens and Danelle Stevens-Watkins spoke on the Diversity, Equity, Inclusion and Representation in the Distilling Industry panel during the 3rd annual James B. Beam Institute Industry Conference in the Gatton Student Center on the campus of the University of Kentucky.

The Kentucky Distillers' Association generously supported the conference, and the following partners supported individual sessions and breaks:

Session partners:

- American Farmland Trust
- Averitt
- Beam Suntory
- Lallemand Biofuels
- Kentucky Innovation – Kentucky Cabinet for Economic Development

Hospitality, Happy Hour and Experience partners:

- Fire Protection Services
- Great Western Malting
- OPC Pest Services
- Malteurop
- Speyside
- Heaven Hill
- PNC Private Bank
- AnyRoad

An Expo took place on all three days where 53 companies and organizations shared their technologies and services. During the expo times, students, faculty and industry reps presented posters to discuss their research and expertise.



The 3rd annual James B. Beam Institute Industry Conference included a vendor expo in the Gatton Student Center on the campus of the University of Kentucky. More than 50 businesses and organizations shared their technologies and services with conference attendees.



The production of bourbon whiskey is an important driver of Kentucky's economy, with tremendous potential for expansion.

Established in 2019, the partnership between the University of Kentucky and the James B. Beam Distilling Co. was formed to facilitate the growth of Kentucky's spirits industry. With the goal of supporting the development of Kentucky's workforce, promoting Kentucky as the production and innovation capital of the bourbon industry, and building effective alcohol awareness initiatives, this partnership will promote the welfare, prosperity and sustainability of Kentucky's spirits industry for generations to come.

Dr. Seth DeBolt
Director, James B. Beam Institute for Kentucky Spirits
309 Plant Science Building
Lexington, KY 40546-0312
beaminstitute@uky.edu

