Letter from the Executive Director

Dear friends,

Early in the summer of 2021, Savanna Institute’s Farm Director Erik Hagan found something special at our new farm in Sauk County, Wisconsin. When poking around in a patch of prairie beside one of the crop fields, Erik came across a large prickly-pear cactus. The prickly-pear is a threatened species in Wisconsin, and discovering one flourishing in a corner of the farm was a perfect reminder to us at the Savanna Institute about the necessity of learning from the land, watching closely, and listening carefully. It is exactly this careful listening, we believe, that prepares us to respond to the urgency of the moment for agriculture and the climate.

Across our work in 2021, we spent the year listening, learning and building the Savanna Institute into a vehicle that drives a change we need in the world: more trees on farms—trees that provide abundant harvests, draw carbon out of the atmosphere, improve the welfare of livestock, filter water, build soil, and offer refuge for wildlife and people alike.

In a year filled with milestones, one that stands out was our privilege to host the biennial North American Agroforestry Conference (NAAC). This was a once in a generation opportunity for us to convene agroforestry researchers with other leading voices from across the continent to work together on the key question that drives us: how will we scale-up agroforestry for carbon drawdown? Savanna Institute staff put their many years of experience running the Perennial Farm Gatherings to work organizing NAAC. Five days, fifty speakers and nearly 500 attendees later, NAAC succeeded in the task that’s always been at the heart of Savanna Institute’s work: bringing together practitioners and researchers to learn from each other and make each other more successful in agroforestry. (See more on Page 12)

Savanna Institute’s target may be simple—more trees on farms—but our efforts to accomplish this goal are as diverse as the needs and aims of the people with whom we share this important work. In 2021, our efforts included creating more educational resources, conducting groundbreaking research, and building a team equipped to support farmers and landholders in agroforestry. This Perennial Report is an introduction to our efforts, as well as an invitation for you to learn more about the work of the Savanna Institute and to consider partnering with us in it.

Some highlights of our work in 2021 include:

• Our Apprenticeship Program paired 14 apprentices with 12 mentor farms for collaborative, on-farm learning experiences. (See more on Page 11)

• We released new online courses and multimedia resources about agroforestry in action in the US Midwest, which reached people worldwide in three languages. (See more on Pages 13 and 24)

• Our Demonstration Farm Network grew with new partner farms — including visionary generosity that enabled us to expand our Spring Green Campus along the Wisconsin Riverway to include almost 800 beautiful acres of land in a community of innovative farmers and welcoming neighbors. (See more on Pages 15-18)

• For the first time ever, the Savanna Institute, together with the UW-Madison Department of Horticulture and the UW Biotechnology Center, sequenced the genome of the American hazelnut. (See more on Page 22)

• Savanna Institute’s leadership team grew, including Administrative Director Brandi Brandes, Development Director Alison Long, and Director of Research and Commercialization Fred Iutzi. (See more on Page 4)

• We published new research on how to overcome bottlenecks and expand chestnut value chains. (See more on Page 8)
New grant funders invested in our mission, including the US Environmental Protection Agency, Great Lakes Protection Fund, USDA Natural Resource Conservation Service, and the Chicago Community Trust. (See more on Pages 6 and 10)

We set the stage for the launch of Canopy Farm Management, a business with a mission to increase the supply of tree planting and perennial management services in the region. (See more on Page 19)

Building on this foundation, in September we launched an Agroforestry Adoption Program. It took several years of learning from farmers and landowners about what they need to successfully adopt agroforestry, as well as fundraising to hire experienced agroforesters to staff the program. In just the last four months of 2021, this Program started work with 56 farmers and landowners, who were actively transitioning 916 acres to agroforestry, with further plans for agroforestry involving more than 3,370 acres. (See more on Page 20)

At the heart of the Savanna Institute is a community of people who care deeply about our mission. My colleague and friend Dr. Kevin Wolz has now stepped away from his role as co-Executive Director of the Savanna Institute in order to lead Canopy Farm Management in its sister mission: to provide professional agroforestry services for farms of all types. Kevin was a co-founder of the Savanna Institute, and thankfully the organization will continue to benefit from his vision and talents in his role as a Savanna Institute Lead Scientist on our growing research team.

We are deeply grateful for the extraordinary support from partners and friends who have made this year of growth and care possible, and who give us the courage to lean into the future. (See more on Pages 5-8) We have a long way to go, but I know we’re headed in the right direction. One day, when trees are an integral part of Midwest farms, I imagine we won’t even call it agroforestry any longer. We’ll simply call it farming. It’s an incredible honor—and it gives me a foundation of hope for what lies ahead—to be a part of a community working to hasten that day.

We can only do this together. Thank you for being part of this community.

With appreciation,

Keefe Keeley
Executive Director
Savanna Institute

OUR TEAM

KEEFE KEELEY
Executive Director

KATE WERSAN
Senior Director, Partnerships, Outreach and Education

BRANDI BRANDES
Administrative Director

DAVID BRUCE
Director of Agroforestry Adoption

FRED IUTZI
Director of Research and Commercialization

ALISON LONG
Development Director

ERIK HAGAN
Farm Director

KATHLEEN FITZGIBBON
Administrative Coordinator

KEVIN WOLZ
Lead Scientist
CEO Canopy Farm Management

KRISTY GRULEY
Education Program Manager

MICHELE MANSKE
On-Farm Apprenticeship and Engagement Manager

RENEE GASCH
Communications Manager

JACOB GRACE
Communications Specialist

WIL CROMBIE
Communications Specialist

KAITIE ADAMS
Community Agroforester, Illinois

SVEN PIHL
Technical Service Provider, Illinois

BARBARA DECRE
Community Agroforester, Wisconsin

MATT WILSON
Technical Service Provider, Wisconsin

OMAR DE KOK-MERCADO
Agroforestry Technical Service Provider

DEVON BROCK MONTGOMERY
Water Quality Program Manager

XINYUAN SHI
Research Fellow - Riparian Buffers

MONIKA SHEA
Postdoctoral Fellow - Landscape Ecology

BILL DAVISON
Value Chain Development Manager

SCOTT BRAINARD
Tree Crop Breeder

ELIZA GREENMAN
Germplasm Specialist

NATE LAWRENCE
Ecosystem Scientist

DAVE HOPEY
Field Operations Manager
As a nonprofit organization, the Savanna Institute depends on financial support from grassroots donors, private foundations, and public grants to advance its mission. Thank you to all of our donors for supporting our work.
LAYING A FOUNDATION

We see support for agroforestry by public and private funders continue to grow and diversify.

As a leader in advancing agroforestry in the US, the Savanna Institute organizes its work around three main pillars: development of tree crops and their value chains, research and demonstration of agroforestry farming systems and stakeholder outreach and education. Our wide-ranging work is done in close partnership with Midwest farmers, scientists, educational institutions, government bodies, donors, investors and other nonprofits.

2021 EXPENSES

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<tr>
<td>Operations</td>
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<td>Education/Outreach</td>
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<tr>
<td>Agroforestry Adoption</td>
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<td>Spring Green Campus</td>
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<td>Staff</td>
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<tr>
<td>Fundraising</td>
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2021 INCOME

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<td>Other grants</td>
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IMPACT INVESTMENT PLANS

Over the past 10 years, perennial crop income in the U.S. averaged an annual return of 12.2%, compared to 4.5% for annual crops.

The Savanna Institute seeks to advance perennial tree crop markets by connecting directly with companies looking for perennial tree crops and by making the case for why perennial tree crops have strong investment potential. Our research team created comprehensive Impact Investment Plans for chestnuts and hazelnuts that answer key market questions and provide blueprints for rapidly scaling-up other perennial tree crops.

Featured: Savanna Institute staff David Bruce and Canopy staff Patrick Michaels and Kevin Wolz planting currant varieties bred for improved flavor, which will lead to expanded market opportunities for perennial crops.
LEARNING FROM EACH OTHER

NEW PARTNERSHIPS TO GROW THE MOVEMENT

Agroforestry requires partnerships to flourish.

We continue to focus on building support for agroforestry through partnerships, striving to better understand how we can support the work already being done by partner organizations across the United States and the region. Over the past year, emerging partnerships focused on education and technical support to improve water quality, explore barriers to urban agroforestry training programs, develop professional development resources for agricultural professionals, and improve access to educational resources and technical support.

2021 ENGAGEMENT

108,000
VIDEO VIEWS

29,000
WEBSITE VISITORS

13,000
PUBLICATION DOWNLOADS

3,800
ACRES OF FARMLAND

1,265
EVENT ATTENDEES

1,160
ONLINE COURSE REGISTRANTS

60
APPRENTICES AND MENTORS
NEW EVENTS TO BUILD COMMUNITY

The Savanna Institute is building a community of practice to support perennial farmers in the Midwest. We offer a variety of agroforestry community-building and skill-sharing events throughout the year.

WEBINARS
The Savanna Institute partnered with agroforestry practitioners and professionals to host webinars. Available to watch on our YouTube channel, our webinars focused on relevant topics including:
- Future of food forests
- Climate resilience and justice
- Nutshell conversations
- Land trusts, ownership pathways and financial partnerships with businesses and federal programs
- Silvopasture food safety
- Elderberry propagation, processing and market opportunities
- Black currant agronomy

FIELD DAYS
The agroforestry community gathered for field days in Minnesota, Wisconsin, Indiana, and Illinois in 2021. Fields Restored Farm and Memorial 4H Camp in Illinois and Mary Dirty Face Farm and Lily Springs Farm in Wisconsin were among the sites visited. Community members had an opportunity to discuss alley cropping, silvopasture, pollinators, soil health, black currants and women in farming.

Featured: Elderberry flowers during a field day hosted by Lily Springs Farm. Staff from the 100-acre regenerative farm in Northwest Wisconsin near Osceola consult on our elderberry grower resources.

THE NORTH AMERICAN AGROFORESTRY CONFERENCE

In 2021, the Savanna Institute hosted the North American Agroforestry Conference (NAAC) bringing together nearly 500 participants from 15 countries for five days of energizing conversations, networking and peer learning.

In partnership with the Association for Temperate Agroforestry, the Savanna Institute organized the biennial international conference around the theme: “Scaling up Agroforestry for Carbon Drawdown.” Discussion topics engaged included: climate resilience, equity in our food and agricultural systems, mobilizing for action, social impacts of agroforestry, markets and finances, and more.

Conference recordings are available on the Savanna Institute website. The event was made possible by a generous show of support from our local and national sponsors.
“Everybody shouldn’t have to start from scratch; I want to share what I’ve learned.” - Linda Hezel, mentor farmer

Linda stewards Prairie Birthday Farm, a perennial agriculture operation in Kearney, Mo. Her curiosity and close attention to what the land and the plants have to share is what makes Linda such an amazing mentor for agroforestry apprentices. Mentoring aspiring women farmers, Linda works side-by-side with apprentices on her farm, an educator learning alongside her students.

The 10-week program each summer includes on-farm training with a mentor farmer and community-building opportunities among a cohort of apprentices and mentors. The apprenticeship program grew to 12 mentor farms and 14 apprentices in 2021. We greatly expanded mentor and apprentice support this season, hosted one remote field day, three in-person workshops, and 14 public events for apprentices to attend.

Online Courses

Our online coursework helps beginning farmers strengthen their agroforestry foundations, understand and adapt to climate change, and learn new marketing and business skills.

In 2021, more than 1,000 people registered for Savanna Institute’s Online Agroforestry Courses. Led by Kristy Gruley, the education team launched new curricula to meet beginning farmers’ needs. The Perennial Crops and Practices online course, for example, introduces the characteristics, considerations and economics of each of the five core USDA-defined agroforestry practices and 12 of the most important perennial crops for agroforestry in the Midwest. To grow agroforestry, we must have skilled practitioners and knowledgeable professionals that can help others along the path toward perennial agriculture.
Silverwood Park in Dane County, WI is one site in a growing network of agroforestry demonstration farms across the Midwest. Visitors at Silverwood can see an 18-acre alley crop demonstration established by the Savanna Institute in collaboration with Friends of Silverwood Park. The field integrates organic row crops with alleys of chestnuts, elderberry, black currant, black walnut and hybrid poplar.

Demonstration farms serve as accessible education hubs where Savanna Institute and its partners host field days and workshops for the public. The sites also provide tree crop germplasm repositories for variety trials. Half of the farms in our Demonstration Farm Network are directly managed by the Savanna Institute and the other half we advise but are managed by close partners.

The Savanna Institute is excited to welcome Hudson Farm to its demonstration farm network. The 120-acre farm in Urbana, IL features multifunctional windbreaks and alley cropping, along with hazelnut and elderberry variety trials.

SAVANNA INSTITUTE-MANAGED DEMONSTRATION FARMS
- Fields Restored
- Hudson Farm
- Silverwood Park
- Spring Green Campus
- Memorial 4H Camp

OTHER SAVANNA INSTITUTE SITES
- Savanna Institute Illinois Headquarters
- University of Illinois Field Experiments
- Spring Green Campus - Savanna Institute Wisconsin Headquarters

Featured: Dutch white clover planted as ground cover in an alley crop field at Silverwood Park in Wisconsin.

Below top: Iroquois Valley Partner Dave Miller planting paw paws on Rock Creek Farm in Illinois.

Below bottom: Betsy Ruckman working at an Illinois demonstration farm.
The Savanna Institute put down roots in 2021 with the establishment of a farm campus near Spring Green, WI. This network of research and demonstration farms consists of four properties surrounding the town of Spring Green, each designed to demonstrate agroforestry practices in different contexts and on different scales. Together, the farms introduce farmers and landowners to the full breadth of agroforestry systems and as many crops as possible.

- The North Farm is located directly north of the Wisconsin River, comprising well-drained river valley bottomland and undulating upland hillslopes and is well suited for researching and demonstrating various silvopasture approaches and alley cropping. This farm contains an almost complete watershed, making it valuable as a site for water quality research.
- The Valley Farm consists of flat, highly productive farmland along the Wisconsin River, and is ideal for intensive research plots, variety trials, and large scale alley cropping demonstrations.
- The Hillside Farm, located within sight of Frank Lloyd Wright’s Taliesin, contains a mature silvopasture operation, extensive cattle handling and management facilities, and several modern buildings for hosting workshops and educational events.
- The South Farm contains both riparian and upland ground, and offers opportunities for multispecies silvopasture, riparian buffers, orcharding systems and facilities ideally suited for tree crop processing.

The Spring Green Campus takes advantage of this network of farms to create a “home base” that is more than the sum of its parts. Since no single farm possesses the varied landscape required to demonstrate the full potential for agroforestry in one place, the variety of land types and settings represented by the four farms provide room for the campus to grow into an organizational center-of-gravity and physical headquarters. Staff and equipment is also shared across multiple farms.

In addition to providing opportunities for expanded programming, the Spring Green Campus represents an opportunity for the Savanna Institute to “walk the walk”, engaging fully in the complicated process of becoming neighbors, community members, and stewards of land. These new relationships represent an opportunity for greater humility and authenticity as the organization lives out its mission of expanding agroforestry in the Midwest.

The Spring Green Campus is located on the Wisconsin River watershed in the Driftless Area. The campus occupies the traditional land of the Ho-Chunk Nation. As stewards of the land, the Savanna Institute strives to repair the soils depleted from years of tillage, restore the biodiversity of the oak savanna ecosystem native to the region, and honor the ancestral farming methods that influence agroforestry.

Listening to the Land

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Landowners and farmers need services to scale-up agroforestry in our region. That is why Savanna Institute has invested in a business: Canopy Farm Management.

As an outgrowth of its impact investment planning in 2021, the Savanna Institute worked with Grantham Environmental Trust to launch Canopy Farm Management. A portion of Canopy’s profits will support the Savanna Institute in advancing its nonprofit research and education mission.

Canopy provides professional tree planting and perennial farm management services to customers in key regions of the Midwest—making establishing and managing agroforestry systems viable for landowners who may not have the time or equipment available to do the work themselves.

To serve as Canopy’s new Chief Executive Officer, Kevin Wolz stepped down from his role as co-Executive Director of the Savanna Institute. Keefe Keeley, who has led the Savanna Institute since 2014, continues on as its sole Executive Director.

Canopy Farm Management

NEW SUPPORT FOR AGROFORESTRY ADOPTERS
Savanna Institute’s Agroforestry Adoption Team has expanded its Technical Support Program in Illinois and Wisconsin.

Team members work directly with farmers, landowners, agencies, and local organizations to make agroforestry adoption easier at the field and community level. Savanna Institute’s Community Agroforesters serve as the first point of contact for landholders who have questions about agroforestry. Technical Service Providers conduct site visits and help design and implement agroforestry systems well-suited for the land. Farmers who join the Technical Support Program also receive help with requesting financial assistance through cost-share applications to, for example, through the USDA Natural Resources Conservation Service. Learn more at savannainstitute.org/technical-support or call: (608) 448-6432.
The Savanna Institute is developing strategic partnerships to increase the viability of agroforestry in the Midwest. Our goal is to stimulate the development of regional food systems that can realize the full potential of agroforestry.

We have developed trusting relationships with farmers, entrepreneurs, and a variety of organizations to increase our capacity for innovation. Participatory research is a primary tool that we use to collect and disseminate information. As a result, we know which crops are ready to scale up and we are laying the foundation for their growth. Encouraging trends within financial technology, crowdsourcing of data, investments in green finance, and increasing awareness of climate change have opened up new possibilities for creating viable perennial farming systems.

Like mycelial networks in the forest, our agroforestry networks are most resilient when they are well connected and supported by a diverse community. Mutualism is key. By sharing information, energy, and optimism we are empowering people to engage with agroforestry. For example, new relationships that developed following the release of the Chestnut Impact Investment Plan have matured into formal partnerships. These include: working with EarthSense to develop autonomous robotic chestnut harvesters, partnering with Food Science faculty at the University of Illinois to quantify chestnut quality parameters, and collaborating with a network of chestnut growers in the eastern US, faculty at the University of Wisconsin, and SeedLinked on a coldhardy chestnut breeding project.

Berries are key crops in agroforestry systems. Elderberries, black currants, honeyberry, and aronia all have tremendous potential for wider cultivation and use. We are working with Chef Odessa Piper, Cadre Restaurant in Madison, and the Seed to Kitchen Collaborative to elevate the standing of black currants in Wisconsin. This project will lead to new relationships and niches in the marketplace for black currants and other berries.

These relationships are designed to catalyze the development of resilient supply chains capable of delivering perennial agriculture products to consumers. Additional partnerships that include some combination of philanthropic capital, conservation, agritourism, cooperative business models, and community-invested agriculture will likely play a role in overcoming longstanding barriers to supply chain development. These initiatives can support early adopters and build infrastructure in the near term, but ultimately a broad coalition needs to work together from the bottom up and the top down to increase the coherence of rural communities and ensure they are part of a perennial food system that produces abundant food while regenerating the land.

Our view of regenerative food systems is based on the understanding that people thrive when they have meaningful work that is rooted in the land and a specific place. People, communities, and the land all thrive under diversified perennial food systems. The key next step is to increase the scale of agroforestry so it can draw large quantities of carbon out of the air and store it in plants and the soil where it will make our food system more resilient. In the process, agroforestry will also draw the best out of people. New connections with each other and the land will support a flourishing agrarian community.

**GROUND-BREAKING RESEARCH**

After more than a century of systemic underinvestment, the Savanna Institute has made research advances that will help catalyze a major expansion of agroforestry in the Midwest.

Savanna Institute’s Scott Brainard collaborated with UW-Madison Department of Horticulture and the UW Biotechnology Center to sequence the genome of the American hazelnut for the first time ever. This genome will be a valuable tool as we continue to study the genetic control of important traits in hazelnuts. Meanwhile Monika Shea initiated her research into tree suitability mapping that will help farmers choose the best tree crop varieties for their ecosystem and Fred Iutzi came on board to lead the team. Together, our research team laid the foundation for even more advances in 2022, including variety trials for serviceberry, currant and elderberry plus a chestnut cold tolerance and a currant shade tolerance trial.
NEW MULTIMEDIA RESOURCES

The Savanna Institute expanded its collection of multimedia resources in 2021. Videos, podcasts and publications introduced beginning and established farmers to agroforestry terms and best practices.

FOOD SAFETY IN SILVOPASTURE

Our Food Safety collection is an essential set of resources for farmers integrating livestock into their orchard and specialty systems. The guides explain important legal requirements and are available for free online in English, Spanish and Hmong. Materials were developed in partnership with Farm Commons, Wisconsin DATCP, and UW-Madison Division of Extension.

ELDERBERRIES

Elderberries have been used by humans for centuries as both food and medicine. Demand for elderberry products in the US continues to exceed supply as consumers seek out elderberry products as a source of immune system support. The Savanna Institute created resources intended to introduce both prospective elderberry growers and consumers to this promising native perennial agroforestry crop.

VIDEOS

Video tutorials produced by Wil Crombie on our popular YouTube channel featured agroforestry stakeholders and pioneers in 2021, such as Terry Durham of River Hills Harvest, Lupe Rios from Forrest Keeling Nursery, and Kathy Dice of Red Fern Farm.

PODCAST

Savanna Institute’s podcast produced by Jacob Grace features selections from our audio archive and special interviews with staff to help answer listener questions.

AGROFORESTRY AS A CLIMATE SOLUTION

Research consistently shows agroforestry as one of the most effective ways to mitigate climate change.

Perennial agriculture has the potential to turn soils into living sponges that buffer against flooding and drought, and agroforestry in particular has the potential to sequester a meaningful amount of atmospheric carbon and help stabilize the climate. The Savanna Institute sees an unparalleled opportunity for agroforestry to transform the Midwest agriculture into a climate solution.
It’s time for systems-level change, and we can all play a part.

Research and farmer experiences show that by adopting agroforestry systems, millions of acres in the Midwest could not only be more profitable for farmers, but also make agriculture a solution to stabilize the climate, purify waterways and generate healthy, local food. For agroforestry to become an option for all Midwest farmers and landowners, we need your help. Your support will provide educational resources, direct support for farmers and landowners, and underwrite cutting-edge research in tree crops. Are you ready to be part of the transformation?

For donation options or to learn more, please visit: savannainstitute.org or call Development Director Alison Long at (608) 448-6432 ext. 211