

Summary Report
on the
Commonwealth Agriculture Summit
April 12th, 2024, in Richmond VA



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Executive Summary

On April 12, 2024, Virginia Cooperative Extension hosted the Commonwealth Agriculture Summit in Richmond VA, with approximately 100 individuals in attendance. The Summit focused on three goals:

- Define relevant innovations needed for local producers,
- Help producers maintain and grow their operations for positively impacting communities, and
- Identify priorities for the agriculture industry we can collectively support.

The structure of the event was based on an “Un-Meeting” format, which prioritizes engaging and listening to participants to surface key insights. The structure included three panels (a.k.a., “ignite sessions”), with each key informant allocated four minutes to highlight predetermined areas of focus: (1) “Maintaining Agriculture’s Edge,” featuring Secretary Matt Lohr, Robert Mills, Dr. Kang Xia, and Dr. Joseph Oakes; (2) “Processing and Challenges for Growth,” featuring Jennifer Ligon, Eric Bendfeldt, Jim Saunders, and Melissa King; and (3) “Land Use,” featuring Rachel Henley, Adam Downing, Commissioner Joe Guthrie, Dr. John Fike, and Nadine Jackson. During each panel presentation, participants captured thoughts, questions, and comments on index cards, which were then organized into themes for deeper conversations in breakout discussions. Those themes included:

- 1. “Maintaining Agriculture’s Edge”**
 - 1.1. Relationships and Trust
 - 1.2. Education and Training
 - 1.3. Return on Investment (ROI) & Applied Research
 - 1.4. Technology
- 2. “Processing and Challenges for Growth”**
 - 2.1. Marketing & Incentivizing Labor Opportunities
 - 2.2. Sustainable Food Systems & Value Chains
 - 2.3. Labor Markets/Segments
 - 2.4. Advanced Technology & Processing
- 3. “Land Use”**
 - 3.1. Environmental Concerns/Issues
 - 3.2. Financial Feasibility
 - 3.3. Legacy Planning
 - 3.4. Land Use Competition



By the end of the Summit, 17 key informants had sparked ideas that yielded 12 general themes, supported by more than 300 data points (i.e., participants’ submitted index cards). This report presents examples of input by thematic area, with brief summaries of the breakout discussions depicting both broad discussion topics and more specific suggestions for Extension research and practice. As participants departed, they were encouraged to continue conversations, helping Virginia maintain its standing as a pacesetter for advancing agriculture technology in ways that value and perpetuate a strong heritage. Innovation, defined in a way that contributes to locally relevant decision-making tools, allows Virginia Cooperative Extension to remain a relevant conduit of research-based, tangible information to stakeholders. Responding to community-based needs with practices, products, and related education and training is further enhanced through collaborative efforts with state and local agencies in executing the Land Grant mission.

Summit Framing

The 2024 Commonwealth Agriculture Summit was opened by Dr. Mike Gutter, Director of Virginia Cooperative Extension (VCE) and Associate Dean of Virginia Tech's (VT) College of Agriculture and Life Sciences (CALs). He presented three primary goals for the event:

- Define relevant innovations for local producers,
- Help producers maintain and grow their operations for positively impacting communities, and
- Identify priorities for the industry that we can collectively support.



Dr. Alan Grant, Dean of VT CALS, further reiterated that the objective of the summit was to listen to the stakeholders in the room, define their needs for agricultural industry, and articulate the needs of producers and allied industries to grow operations and businesses with positive impact on communities. The aim was to have a set of key priorities by the end of day that can be collectively supported.

For context, Dr. Grant recapped emergent initiatives shaped by the 2018 and 2022 agriculture and natural resources (ANR) summits. The SmartFarm Innovation Network and Center for Advanced Innovation in Agriculture (CAIA) leverage resources and talent for ANR industries. Agency 229 funding activates state government investments and partnerships on and off campus that catalyze relevant translational research and workforce development to support industry. Agriculture and forestry are the largest private industries in VA and are positioned for growth. Our climate, demographics, and geography (for trade), coupled with efforts of Virginia State University (VSU) and VT as the two land-grant universities (LGUs), allow for new job creation, workforce development for industry, and response to increased demand. We translate fundamental and applied research through the Virginia Agricultural Experiment Station (VAES), VCE, and other partnerships. Virginia is positioned well for growing industry, but things need to happen; universities must be comprehensive to serve the global agricultural industry, engage with industry and communities in Virginia and globally, and develop and integrate new technology into sound management principles and a changing workforce. The purpose of the LGU is to serve people through teaching, research, and Extension; to come together to help industry have what it needs through a collectively chartered course to advance and thrive.

Dr. Mary Burrows, Associate Dean for Research with the VAES, shared that while 80% of faculty are on Virginia Tech's campus in Blacksburg, faculty are also located at 11 Agricultural Research and Extension Centers (ARECs), serving across industry commodities and providing fundamental research. The SmartFarm initiative engages 17 faculty who were connected with a cluster hire, as well as 170 other faculty and 30 grad students. Future generations of professionals are being developed by involving students in communication among stakeholders. CAIA is exploring areas of biotechnology and agrivoltaics, among others, and documenting the impacts of investments made toward infrastructure that have resulted in increased safety, productivity, and research capacity. Stakeholder input during this

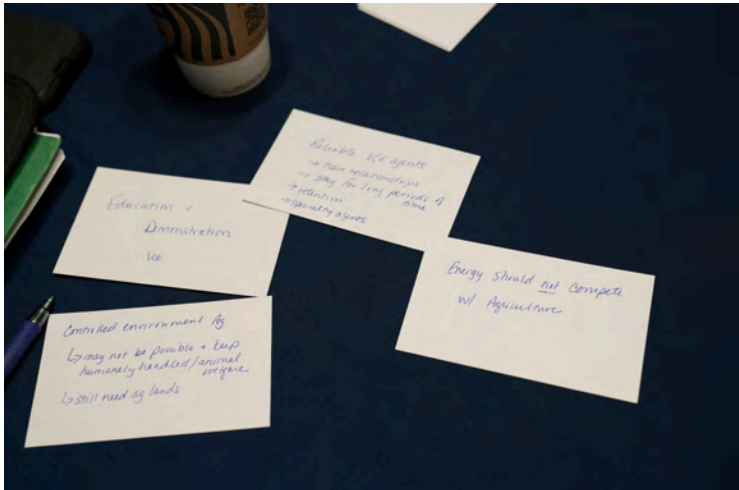


summit, as well as through needs and research assessments, helps each AREC board and agency determine core missions, including documented needs and priorities. Future investments may come out of summit discussions for seed funding, priorities, committees, and research. It is the intent of the LGUs to share priorities with funding agencies, and leverage them for future activities and funding with a lens of determining who is being reached (or not) with these activities.

Dr. Mike Gutter concluded opening remarks with some information about the format of the summit. He shared that it would be about listening and learning in a different format than prior summits, with a focus on who we want to be in the Commonwealth of Virginia. The aim was to be aspirational in viewing the LGUs as the academic institutions that offer trusted solutions for producers, local and state leadership, communities, families, etc. The goal is to build capacity and resiliency through a two-way conduit for locally relevant information necessary to determine how and where it is to be applied.

The planned approach was driven by a priority for listening, using an “Un-Meeting” format to engage participants. The foundational information was designed to be conveyed through three panels (a.k.a., “ignite sessions”) of four speakers, each speaking for four minutes. During each panel presentation (see slides in Appendix A), the audience was invited to capture thoughts, questions, and comments on index cards. These notes were compiled by a team of faculty and graduate students from VT’s Department of Agricultural, Leadership, and Community Education (ALCE) and summarized into themes used to drive deeper conversations in breakout sessions throughout the day. The goal was to figure out what we

learned from 12 sessions of information, through input from approximately 100 people, across thematic topics. The aim of these breakouts, with articulated themes, was to synthesize information and provide input for university administration to make decisions, becoming a foundation for what we can aspire to over the next few years and how to work together to fulfill those aspirations.



Maintaining Agriculture's Edge

The first panel of the day focused on "Maintaining Agriculture's Edge." The specific topics were:

- "Maintaining Agriculture's Edge as a Leading Economic Driver," presented by Secretary Matt Lohr
- "Maintaining Agriculture's Edge as a Leading Economic Driver," presented by Robert Mills
- "Technology and Innovation in Agriculture," presented by Dr. Kang Xia
- "Results of CAIA listening sessions," presented by Dr. Joseph Oakes

In response to these key informant presentations, Summit participants submitted 160 index cards that reflected four broad theme areas: (1) Relationships & Trust, (2) Education & Training, (3) ROI & Applied Research, and (4) Technology.

Relationships & Trust

The "Relationships and Trust" theme emerged from ideas surrounding the relationship between VCE and the agriculture community. Examples of participants' comments on index cards include:

- "Increasing trust between Extension & producers."
- "How do agents build trust with producers? Professional development."
- "How to get people to listen to Extension and value what it has to offer vs random internet searches."
- "VCE Farm Management Agents are needed - they will not only assist farmers in their decision making and budgeting, the entire local areas will benefit financially. For farming to continue, transition planning is of utmost importance, each agent may focus on one specific area as well as the general financial needs of producers."
- "Reliable VCE agents - have relationships, stay for long periods of time, retention, specialty agents."

During the breakout session, these ideas set the foundation for the conversation, which then became about how to better train Extension agents for longevity, rather than perceiving it as a transitory, "stepping stone" job. Increased longevity could provide a stronger foundation for building trust and relationships between Extension agents and the community. Others described how Extension has lost some reputability, with non-governmental organizations (NGOs) and private companies filling gaps in providing knowledge to farmers. Ultimately, the conversation landed on how Extension agents can better serve and preserve the dignity of the agriculture community while striving for equity.



Education & Training

Participants articulated the need for external consumer education on the agricultural industry, as well as internal agricultural industry training and workforce development. This was reflected in comments on index cards like the following:

- "Consumer to retailer importance/locally grown. I have found that producers want to sell locally."

However, small retail, restaurants, etc. don't have buy-in or see the importance of buying local. How do we educate retailers?"

- "Workforce development - enhance agriculture technology education in K 12 ag."
- "Workforce training center extension units."
- "Is industry expected to fill in education/research gaps as ag communities consolidate?"
- "Need to highlight success stories of first-generation farmers - show hope & road map that shows how someone can be a row crop farmer without inheriting or marrying into it."

Within the breakout room, participants discussed the need for Virginia Tech to develop and support curriculum for workforce development and training programs at local community colleges, the need for third-party certification and verification of the conservation program, and increased education on farmland and forest land preservation. Participants identified the need for training and resources for the Spanish-speaking workforce, especially with pesticide and fertilizer application. Participants expressed concerns about limited information-sharing among VCE agents. Further, participants expressed a lack of knowledge of the inter-state communication and larger Extension system, noting that increased awareness about this system may be helpful. The group also expressed the need to educate and communicate with the public about locally-grown food and resources. This evolved into educating the public on considering the carbon footprint of consuming food produced at a distance versus locally. The conversation continued into the need for education about farmland training and to "tell the story" of agriculture and producers to communicate to potential producers about how to start farming.



Return on Investment (ROI) & Applied Research

The theme of "Return on Investment (ROI) and Applied Research" emerged from index card statements like the following:

- "Economic (ROI) must be built into extension programming, for growers to implement."
- "Applied research with financial analysis with the connection between academia and farmers."
- "Cost-benefit analysis for new Ag technologies."
- "Need to make more research applicable and economically feasible for producers."
- "Connect researchers to research ideas from farmers."

The breakout session revealed participants' concern about the economic viability, sustainability, profitability, and technological advancement in farming practices. Participants underscored that ROI is

about profitability and sustainability; for a farming venture to be sustainable, it should be profitable. They opined that there is a need to conduct comprehensive cost-benefit analyses for new agricultural technologies. Participants hope to see cost-effective technology, making it more accessible to farmers. ROI is said to drive future investment in agriculture by younger generations. Further, the breakout discussion emphasized the need for research on the cost and budget of the top ten crops in Virginia. Likewise, research should be conducted on the opportunities available for farmers in the international market, as well as the challenges (e.g., organic certification). Participants emphasized the need for continuous technology support for producers to facilitate the adoption of and effective utilization of agricultural technologies.

Technology

The “Technology” theme emerged from participants’ written comments like the following:

- “Trend of Ag Tech - We know where we need to be, but if we keep the speed of tech advancement, where do you see the potential of food production?”
- “How do we support farms of all sizes with transitioning technology and cost barriers?”
- “We need the trial data on new ag tech before adoption. We don't adopt new technology because how do you take a risk when possibility is so low?”
- “Bring together the concepts of technology.”
- “Challenges of innovation and technology translation to users?”
- “Technology as a driver of innovation.”

The breakout session discussed that the use of technology is crucial for increasing productivity and sustainability. However, challenges like affordability and accessibility exist. It is essential for farmers to share their ideas and innovations with each other. The participants also highlighted how tax breaks can help farmers afford new technology, especially since high costs and interest rates can be discouraging. They mentioned the need to keep testing and improving these technologies over time, and it is only fair that farmers get compensated when their data is used to improve models. When it comes to combining green energy with farming, participants suggested that factors like available land and transmission capacity should be carefully considered, making sure that we are preserving wealth for future generations. They agreed that artificial intelligence can be used as more than just mechanization or robotics; it can serve as a valuable tool for farmers to obtain useful information such as weather prediction and foster confidence and trust. However, it also raises existential questions about human roles and job displacement.



Processing and Challenges for Growth

The second panel of the morning focused on “Processing and Challenges for Growth.” The specific topics included:

- “Agriculture Processing,” presented by Jennifer Ligon
- “Agriculture Processing,” presented by Eric Bendfeldt
- “Challenges and Potential Solutions to the Future of the Agriculture Workforce,” presented by Jim Saunders
- “Agriculture Workforce Challenges,” presented by Melissa King

In response to these key informant presentations, Summit participants submitted 78 index cards that reflected four broad theme areas: (1) Marketing & Incentivizing Labor Opportunities, (2) Sustainable Food Systems & Value Chains, (3) Labor Markets/Segments, and (4) Advanced Technology & Processing.



Marketing & Incentivizing Labor Opportunities

A focus on marketing and incentivizing labor opportunities was apparent in the input from summit participants. Many of index cards included related questions, such as the following:

- “How do we engage all levels of the value chain to create demand for VA products/local products + understand barriers?”
- “When a local workforce isn't available, what research can be done to show our regulators that H2A workers are our only option?”
- “How do we come up with a systematic workforce development + training program for all levels?”
- “What will our workforce look like as technology advances?”

Within the breakout room discussion, participants expanded further on the importance of workforce development, agriculture labor requirements, H2A workers, next-generation, and general workforce needs for an evolving agricultural sector. There was interest in educating groups early to build interest in agricultural labor, elevating the importance of agriculture teachers. The discussion covered the topics of foreign labor—those who require H2A or H2B visas, which are foundational to our food system—and how immigration was a systemic barrier to maintaining this integral subgroup of the agricultural workforce. There were also discussions about cultivating a motivated workforce domestically in Extension. The conversation had two distinct components: domestic and foreign agricultural workforce. Ultimately, addressing labor challenges in agriculture requires an approach that considers communication about employment opportunities, more support and better working conditions, and setting realistic expectations about the job to convey a clear understanding of the scope of various roles.

Sustainable Food Systems & Value Chains

The theme of “Sustainable Food Systems and Value Chains” emerged from addressing consumer needs for inexpensive, culturally appropriate, healthy, community-minded foods while considering local producers and the cost and burden on producers. Supporting statements from the index cards include:

- “Building sustainable food systems at the community level.”
- “Food system resilience → Importance of local and regional food sources.”
- “How do we monetize the added value of local food without pricing out consumers?”
- “People want cheap food.”
- “Transactional vs transformational; Leveraging food to meet cultural needs of a diverse population; Reaching people where they are; community focus of foods.”

Notably, participants expressed interest in how Extension can play a role in supporting the elimination of barriers to local production and sale. The breakout room discussion highlighted the importance of supporting locally-sourced food, touching on the importance of marketing and communicating with larger markets. Participants identified the different challenges between large and small scale productions, with the need for small scale producers to be informed about financial programs and assistance. Benefits and tensions of conservation and sustainability was also a prevalent topic among participants. They identified the need to think long-term when adopting conservation programs and to eliminate the reliance on financial incentives. Additionally, participants articulated that sustainability should be considered more than simply conservation; it also needs to consider economic benefit, social sustainability, and generational stability. Ultimately, participants expressed concern for serving the local community and environment, while also considering the financial sustainability of the producers.



Labor Markets/Segments

The interest in Labor Markets/Segments was revealed through participants' notes in index cards, some of which include:

- “Engaging young farmers or those interested in Ag to work on farms. Work towards transition.”
- “Fast-track immigration for H2A workers with good standing.”
- “Fear of labor min. wage & exemptions going away; how to safeguard.”
- “How to incentivize or engage local laborers.”
- “More work programs for offenders.”
- “Should Ag be sold as a second career? Is the future with retirees?”
- “Agritourism as a form of labor.”



The breakout room discussion focused on addressing the challenges and opportunities associated with labor in the agricultural sector. Participants explored issues around immigration policies, labor costs, and the changing dynamics of workforce engagement in farming. They highlighted the need for immigration policies that support the agricultural workforce, including fast-tracking immigration for H2A workers and simplifying labor programs. There was agreement on the need to engage young farmers and immigrants interested in agricultural work,

facilitating their immigration process and transitioning into the agricultural industry. Concerns were raised about the adverse effects of prevailing wage rates on agricultural employers, particularly through the H2A program. The discussion highlighted the disparity between immigrant and domestic labor costs, emphasizing the need to incentivize producers to hire citizens and to fast-track the immigration process for H2A workers so they can contribute to local communities and economies. Further, participants emphasized the role of Extension in supporting programs, conducting relevant research on labor costs, and educating consumers about the factors influencing food prices. Efforts to incentivize and engage local laborers were discussed, along with the need for alternative processing methods for agricultural commodities. Participants advocated for multi-state partnerships and collaboration among associations and government departments to address labor market challenges collectively.

Advanced Technology & Processing

A focus on “Advanced Technology and Processing” emerged from index card statements like the following:

- “Do we have a shortage of meat processing or do we need to help them improve efficiency?”
- “Technical-Job skill development for the technology needed to move VA ANR forward.”
- “Barriers to entry in processing are so high, how can research make this more economical?”
- “Can AI be used to optimize non-mechanized processes?”
- “Increased processing capacity (local) continues to be a need.”
- “Storage [of] meat, fruits, vegetables”

In the breakout session, participants discussed how the efficiency of existing processors impacts the farmers, which was most evident after the COVID-19 pandemic. Additionally, they discussed the challenges encountered by the processing units, like fluctuation in the amount of commodity and lack of good capacity storage. They agreed that while there is a lack of required technologies in some units, one of the major challenges is the lack of educated producers on how to process with the highest efficiency. Because repairing and maintaining new technologies requires advanced tools and knowledge, participants explored ideas for finding skilled labor. Agricultural tours were identified as an opportunity to spark interest among young people to learn different skills. The dialogue advanced into a discussion on the cost of production and consumer preference. While consumers prefer cheap food, advanced technology can increase production costs. So, there is a priority for making technology more efficient. Regarding inspection, participants emphasized the financial support to meet the regulatory requirements and ease the regulatory processes. Further, they agreed that effective communication between the policymakers and the people on the ground can help make the policies more realistic and manageable among those in agricultural processing.

Land Use

The afternoon panel focused on “Land Use.” The specific topics were:

- “Land Use Planning and Succession,” presented by Rachel Henley
- “Succession Planning,” presented by Adam Downing
- “Office of Working Lands Preservation,” presented by Commissioner Joe Guthrie
- “Land Use Planning - Solar,” presented by Dr. John Fike
- “Small Farm Outreach,” presented by Nadine Jackson

In response to these key informant presentations, Summit participants submitted 73 index cards that reflected four broad theme areas: (1) Environmental Concerns/Issues, (2) Financial Feasibility, (3) Legacy Planning, and (4) Land Use Competition.

Environmental Concerns/Issues

In response to the presentations on land use, many of the index cards collected aggregated into a focus on environmental concerns and issues. Example statements include:

- “Need on demand training and easy to understand educational resources for farmland preservation tools - for both landowners and local governments.”
- “Because there are few conservation easements, they must want to develop their land - Myth.”
- “Question of balancing natural resources conservation and economic development is not new... solar is just the latest manifestation.”
- “Solar <=> land use change vs efficiencies vs conservation vs environment vs economies.”
- “Solar decommission plans/other uses, etc; how to clean up our land post solar.”



In the conversation that followed, the discussion surrounded finding the sweet spot between solar energy production and agriculture production, or the concept of agrivoltaics. People expressed concern for solar sites replacing agricultural land use in both the short term and long term, so tread carefully when moving forward with solar energy production. There was also discussion around the solar industry needing to support agrivoltaics and better sharing profits generated while taking accountability for their impact on the agricultural community. This led to further discussion about how land use can happen on an individual and community level, based on trust and also profitability—the latter of which solar companies can offer. Participants shared what they perceive to be Extension’s role, which was better researching what is viable for agriculture and solar sites to co-exist. At the same time, the Commonwealth of Virginia must better fund this type of research and incentivize this type of collaborative effort.

Financial Feasibility

The theme of “Financial Feasibility” arose from participants expressing needs and challenges regarding the affordability of farmland, ability for farmers to sustain their land for the next generation, and considerations of conservation easements. Related statements on index cards include:

- “Farmers need help to understand if their current business is viable.”
- “Lack of affordable land is detrimental to the next generation.”
- “Cost share to support heirs property prevention and remediation.”
- “Conservation easements are great but are not the full solution. What happens to land values for the next generation when the tax benefits of putting land in an easement is gone?”
- “Different innovative investment models—more community involvement.”



In the breakout room, participants expressed a shared understanding of the need for farming to be feasible for both their next generations and new farmers. Regarding this, participants heavily discussed Purchase Development Rights and Conservation Easements, questioning what Extension’s role is when land owners consider their options. Regarding the next generation, participants expressed the need for updated research and a refreshed consideration for what a “new” farmer is. Participants highlighted the high age of the average new farmer, and how incoming producers are often

second-career farmers. Financial incentives with age limits for new farmers should reflect supporting this demographic. Additionally, participants expressed concern for new farmers being supported and educated in both agricultural and financially feasible decisions. The need for not only updated data but increased access to feasibility data among farmers surfaced from discussion; participants specifically called upon Virginia Tech for this action. Ultimately, participants discussing the “financial feasibility” theme were concerned for the next generation, access to information, and farm accessibility and information to the reimagined “new” farmer.

Legacy Planning

Legacy Planning emerged as a theme based on the participant cards like the following:

- “How can Extension better support farm business planning to support successful transition planning?”
- “What education tools can Extension provide to professionals who are/can be involved in legacy planning or farm transition?”
- “How do we prevent land development in a family transitional moment? What can industry do?”
- “Needs to be a bridge between farmers with no family heir and people who want to start farming.”
- “Succession planning: How do we normalize succession planning for 50-80 year olds?”
- “Farm transition—Helping families mediate generational shifting [for] working lands.”

The discussion in this breakout room focused on preserving agricultural land and mediating generational shifts in land ownership. Participants identified the need for education, resources, and support systems to facilitate smooth transitions and address the complexities associated with inheritance, property rights, and family dynamics. Participants emphasized the role of Extension in supporting farm business planning to facilitate successful transitions. There was a recognition of the need for education for families and the know-how of professionals involved in legacy planning. Farm transition planning was viewed as essential for preserving agricultural land and mediating generational shifts in land ownership. Participants identified the importance of connecting heirs to resources and professional support, including certified public accountants (CPAs), attorneys, consultants, and mediators. Likewise, professionals can facilitate productive conversations among family members and guide farm transition. There was also a call for education and training to equip professionals with the knowledge, tools, and resources necessary for productive conversation and effective legacy planning. Participants discussed the need for families to understand the family tree—to know who the heirs are—and deal with land sharing to incorporate those who are not interested in agricultural enterprise.



Land Use Competition

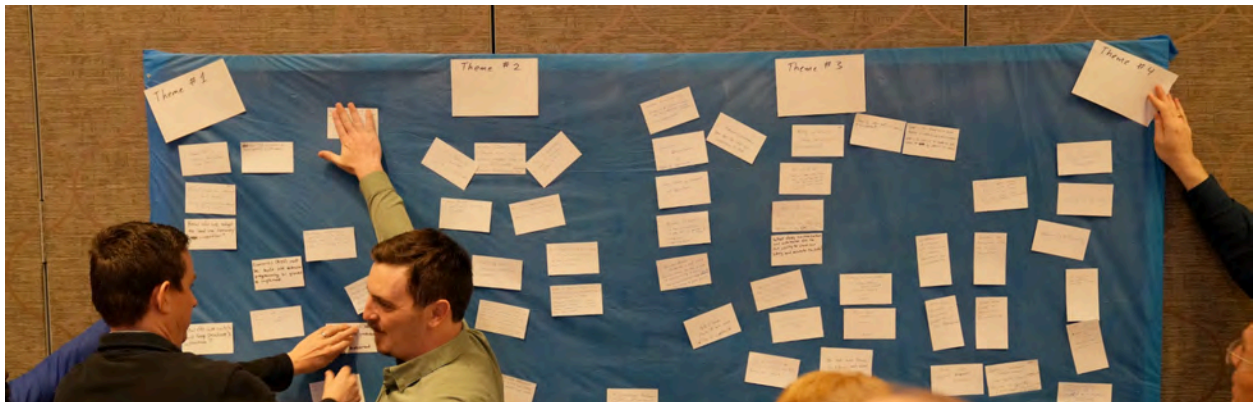
The emphasis on Land Use Competition was based on index card statement like the following:

- “Land use/need vs. land owner opportunity.”
- “Farmland vs solar panels vs housing development.”
- “Urban/rural interface.”
- “Competition for ag land: needs protection.”
- “Competition for different land uses (value/need/opportunity).”
- “Need for protection for working lands so we have production farms in the future.”

The discussion continued in the breakout room, which included points regarding land use, taxation, and tax differentiation. Participants also discussed the rezoning process, highlighting the ongoing categorization and the associated restrictions. Furthermore, the differences between rural and urban areas were discussed, along with the distinct challenges each area faces. The participants discussed the differences between communities and the need to identify the best use of land, based on varied geographic and demographic considerations. The group emphasized that stakeholder communication is crucial for successful partnerships in the land leasing process. Furthermore, participants surfaced concern about the lack of education on property management for small to medium landowners. In the case of absentee landowners, education is required regarding the steps (e.g., contacting relevant parties, understanding policies, and addressing existing issues). There was a recognition of existing farm succession training programs, and a suggestion was made that simple economics education could enhance understanding of land value. Participants also highlighted the importance of land use evaluation. Suggestions were made to increase awareness of state lands and provide more fact sheets to the public. Community collaboration and community-level communication were identified as necessary practices. A proposed way forward was to bring urban planners together with rural sociologists to explore the potential of agritourism in suburban communities.

Closing Remarks

Dr. Megan Seibel (Extension Specialist and VALOR Director) provided closing remarks, expressing gratitude that Virginia agriculture is the focus of both personal and professional endeavors. The diversity of Virginia’s agriculture, forestry, and natural resources necessitates events like the Summit. While the process of the 2024 event was different from ANR summits held in the past, the baseline purpose was the same: pulling together industry stakeholders for collaborative input toward a prosperous future. The “Un-Meeting” format allowed ideas to surface; for seeds of inspiration, provocation, and purpose to be planted; and for the gathering of input that will be compiled in a way for application and momentum. The hope is that conversations started across the network during the Summit continue as Virginia stands as a pacesetter for advancing technology in ways that value and perpetuate a strong heritage. The organizational leaders in the room are people worth knowing, and those who work for Virginia’s land-grant institutions recognize the relationship outreach mission. Participants were thanked for their time and encouraged to contact Summit facilitators with any questions or further input.



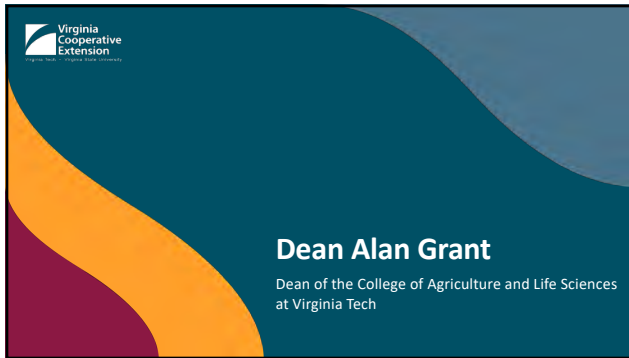
Insights and Implications

Extension is at its best when it is providing research-based information to the public that is relevant, timely, applicable, and practical. The rapid pace of technology necessitates a corresponding response, with an understanding that iterative change has implications for education and financial feasibility. While social and environmental issues are complex, collaborative efforts will help advance reach and impact with the communities we serve. Examples of action-oriented insights that emerged from the Summit discussion groups include:

- Extension faculty, when successfully retained, are valuable in building trust and rapport in communities, which is necessary for being a reputable resource when access to other sources of information abound.
- Extension can serve as a source of training and certification in a variety of areas including, but not limited to: workforce development programs at local community colleges, third party verification of the conservation program, education on farmland and forest land preservation, as resources for the Spanish-speaking workforce.
- There is an opportunity to increase a practical understanding of Extension across stakeholders, including structural and communication efforts across systems.
- A comprehensive cost-benefit analysis for emerging agricultural technologies could aid in decision making about what/why/how to implement the technology, and this could be coupled with reliable farm-level enterprise budgeting and financial analysis tools.
- Stakeholders are seeking resources on how to navigate foreign labor policies and programs, and Extension could provide related educational programming.
- Further collaboration with the Virginia Department of Agriculture and Consumer Services (VDACS) may improve education on regulatory policies impacting production, processing, and sale of products for both large and small scale businesses.
- Extension can serve as a source of reliable information on complex issues, like the juxtaposition of solar energy and agricultural crop production, possibly engaging in facilitated dialog and discussion among trusted community members.
- It is important to actively engage with “new” farmers, regardless of age, by providing adequate education and resources on operational feasibility and sustainability (including decision making regarding finances and production practices).
- Extension should play an active role in legacy planning and farm/forest land preservation by providing education and connections to resources and organizations providing these services. This is an area where engaged effort may serve to “normalize” such critical and contentious efforts for families.
- Extension is present across communities—rural to urban—and should be central to those seeking information on emerging opportunities for communities of varying size, scope, and demographics.



Appendix A: Ignite Presentation Slides



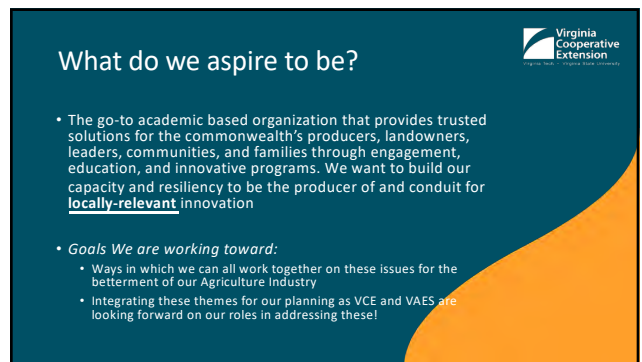
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Appendix A: Ignite Presentation Slides

Ignite Sessions (3 panels)

- Ignite our enthusiasm for an issue
- 4-minute presentations that will go from one to the other. I will read all bios before the panel begins
 - Write thoughts you want to follow up on – on your index cards
 - We don't need to know your name, just your idea
 - After the last panelist has gone for that section, you will have time to come put your cards on the sticky wall, where they will be categorized to help us form breakout conversations
 - When your done with card posting, you can grab a beverage and a snack until the breakout rooms are announced. Then please join one and participate.
 - We will complete this cycle 3 times today on differing issues related to Agriculture Innovation

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Once the rooms are announced

- Once the break-out sessions are identified from the idea generation portion, participants head to whatever session they are most interested in.
- Attendees are free to go where their interests are and leave if their interest wanes.
- There will be help for taking notes and managing conversation flow.

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Follow up

- Work with a team of faculty in ALCE on synthesizing what we learn from the Breakout Sessions.
- We will prepare a brief, an article, and a video for sharing purposes.
- To be shared back with this audience and our partners as well as our new DEAN once he or she is announced.
- These results will also inform VCE strategic planning, equipment planning, as well as helping shape some upcoming hires.

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Secretary Matt Lohr
Maintaining Agriculture's Edge as a Leading Economic Driver

10

Robert Mills
Maintaining Agriculture's Edge as a Leading Economic Driver

11

Innovation and Agricultural Profitability
Matt Holt
APRIL 22, 2024

VT VIRGINIA TECH.

12

Appendix A: Ignite Presentation Slides

VT
VIRGINIA TECH

Analog, Conventional PA, and Digital Agriculture

Relationship between site-specific management, precision agriculture (PA), and digital agriculture (DA)

Note: Diagram is meant to be illustrative rather than comprehensive.
Source: USDA, Economic Research Service Database.

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VT
VIRGINIA TECH

Solid Estimates Regarding Profitability Impacts are Scarce

Figure 2. Estimated Change in Net Farm Income from Precision Agriculture Technology Use (from Center)

A sample of Nebraska farmers from the University of Nebraska Farm Records Database.
Note: The sample examines Midwest row crop farming.

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VT
VIRGINIA TECH

Why it Matters in Virginia

Between 10% and 20% of Virginia farms use PA practices.

But solid ROI estimates remain ... sketchy, limiting adoption.

Plus, the technology is evolving so fast ... "option-value-to-waiting?"

Also, lack of standard data protocols plus data ownership concerns?

Source: USDA, Economic Research Service Database.

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VT
VIRGINIA TECH

What may be coming ... and where Virginia Could Lead!

Quantum computing capabilities combined with quantum sensing technology ... Will soon turn the world upside down!

Computational Agroecology models implemented at the individual farm level?

Make broader use of AI in all dimensions!

But, a current "Agtech Capital Drought?"

Venture capital funding in agriculture technology fell 50 percent in 2023.
Source: Investment activity increasingly by venture partners near industry.

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Technology and Innovation in Agriculture

Kang Xia
Associate Director, Virginia Agricultural Experiment Station
Director, Center for Advanced Innovation in Agriculture
Virginia Tech

VT COLLEGE OF AGRICULTURE AND LIFE SCIENCES **VT** VIRGINIA AGRICULTURAL EXPERIMENT STATION **VT** CENTER FOR ADVANCED INNOVATION IN AGRICULTURE

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10,000 BCE Birth of Agriculture: 10,000 BCE

1800 1st Revolution: mechanization, steam, water, gas power

1940

1841 cradle and scythe

1834 Cyrus McCormick's reaper machine

1870 horse-drawn combine

1902 gasoline tractor

agriculture productivity

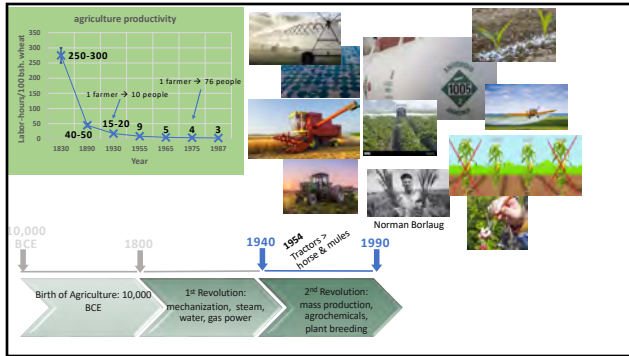
Labor hours/100 bushels wheat

250-300 40-50 15-20

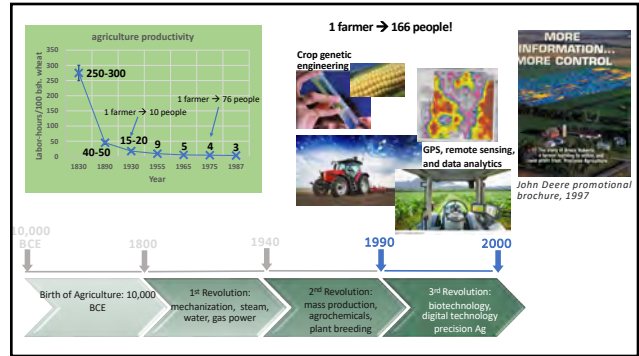
1830 1950

18

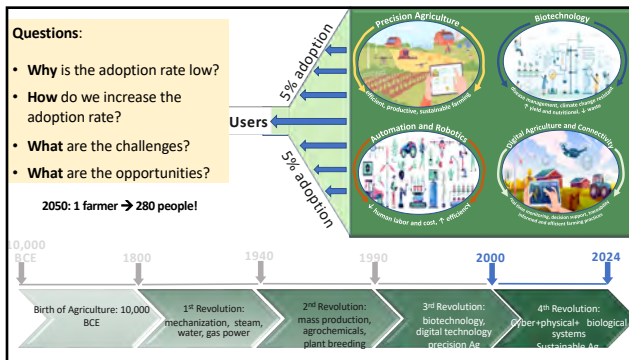
Appendix A: Ignite Presentation Slides



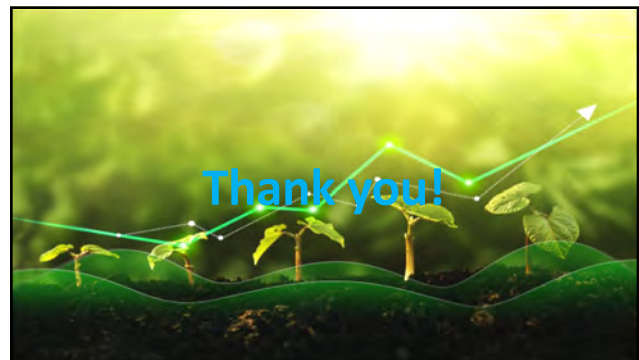
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Appendix A: Ignite Presentation Slides

Virginia...

Beef Industry Facts

Agriculture is Virginia's largest private industry. Virginia boasts (2022 Census of Agriculture):

- 7.3 million agricultural acres (7.8 in 2017)
- Over 1.2 million head of cattle (1.4 in 2017)
- Cattle generate \$695 million dollars** (\$650 million in 2017), **second only to Poultry and eggs**, which has taken a hit in 2023 from Tyson closures
- Only \$0.15 of every consumer dollar goes back to the farmer according to the Virginia Department of Agriculture and Consumer Services (VDACS)

Beef producers want to improve the marketability and profitability of their cattle
Consumers are becoming more concerned that the food they eat is safe, and humanely handled
Large disconnect between most consumers and the producers





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Virginia...

Beef Industry Issues

- Decreasing farms, acreage, and cattle numbers
- Increased fuel and transportation costs
- High dependency on trucking and out-of-state buyers
- In state cattle producers not familiar with finishing
- Timely and accessible USDA processing
- Processing capacity issues
 - Refrigeration capacity for aging
 - Freezing capacity
- Marketing
- Consumer demands
 - Safe and wholesome
 - Animal welfare
 - Source

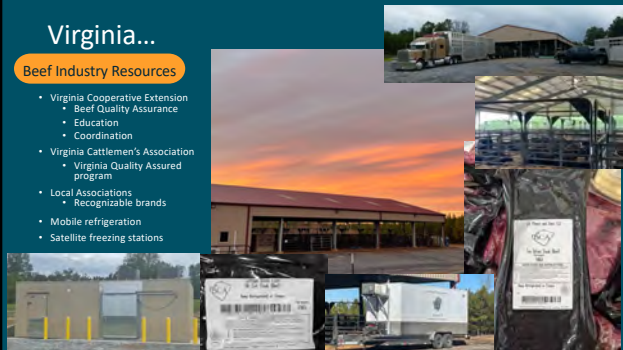


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Virginia...

Beef Industry Resources

- Virginia Cooperative Extension
 - Beef Quality Assurance
 - Education
 - Coordination
- Virginia Cattlemen's Association
 - Virginia Quality Assured program
- Local Associations
 - Recognizable brands
- Mobile refrigeration
- Satellite freezing stations




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Virginia...

Beef Industry Future


- State level vertically integrated beef system
- Beef Hub
- Not dependent on middleman, long distance hauling and fuel fluctuations
- Access to a large consumer market



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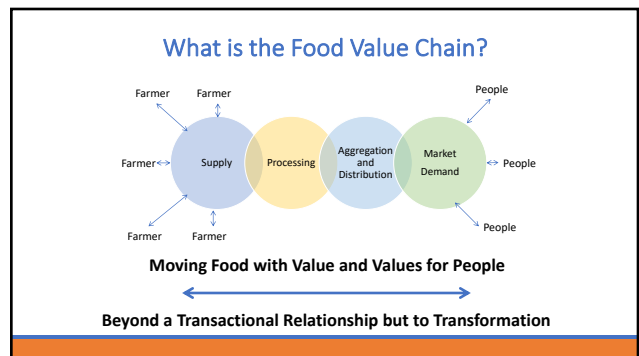
4 By 4: Processing and the Food Value Chain

Eric S. Bendfeldt, Ph.D.
Senior Extension Specialist, Community Viability
Associate Director, VT Center for Food Systems
and Community Transformation



Commonwealth Agriculture Summit
April 12, 2024, Richmond, Virginia

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Appendix A: Ignite Presentation Slides

Emerging Opportunities and Challenges

- ❖ Economic volatility in extremes
- ❖ Manage what you can control
- ❖ Ability to adapt, innovate, and focus
- ❖ 10 to 15 years of management transition
- ❖ Need for high business IQ and foresight to respond quickly
- ❖ Spending influence of teens on food trends
- ❖ Safe, diversified food, fiber, and fuel value chain
- ❖ Transparency and quality assurance from field to fork
- ❖ Healthy soil, healthy people, and healthy planet
- ❖ Climate Smart Farm Commodities
- ❖ Influence of social media
- ❖ The food and farm experience

Source: Kohl, D. (2021). The Economic Outlook for Small to Mid-sized Farms and Food Businesses in a Post-COVID Era. Blacksburg, Virginia.

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Food Trends and Opportunities

- ❖ Environmentally conscious eating
- ❖ Food with purpose
- ❖ Eating to support mental health
- ❖ Plant-based diets
- ❖ Easy food
- ❖ Restaurant evolution
- ❖ Indoor farming
- ❖ Mushrooms
- ❖ Flavor of the Year: Hibiscus
- ❖ Potato milk?

Chefs anticipate the following:

- ❖ Increased focus on reducing carbon footprint
- ❖ Support for local and regional supplies because of ongoing disruptions of the supply chain
- ❖ Prominence of vegetables and seasonal ingredients will continue to expand on plates
- ❖ Hyper-locally sourced ingredients with community focus

Appalachian Sustainable Agriculture Project's 2022 The Business of Farming Conference

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Openings needed for Transformation

- 1) Opening of the mind
- 2) Opening of the heart
- 3) Opening of the will

A movement toward empathy and truly generative listening.
Historians often refer to the habits of the heart and mind.

Senge, P., Hamilton, H., & Kania, J. (2015). The dawn of system leadership. *Stanford Social Innovation Review*, Winter, pp. 27 – 33.

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Jim Saunders

Challenges and Potential Solutions to the Future of the Agriculture Workforce

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Labor needs in the next 20 years.

Melissa King, Virginia Works Manager Fredericksburg

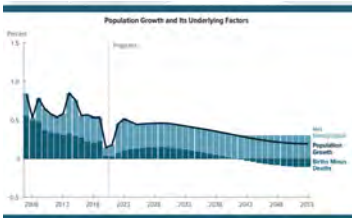


DEPARTMENT OF WORKFORCE DEVELOPMENT AND ADVANCEMENT

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Population Demographic Outlook 2023 to 2053 and it's Underlying Factors

The size of the U.S. population, as well as its age and sex composition, affects the economy and the federal budget. For example, the size of the population ages 25 to 54 affects the number of people employed; likewise, the size of the population age 65 or older affects the number of beneficiaries of federal programs such as Social Security and Medicare.



The Demographic Outlook: 2023 to 2053 | Congressional Budget Office (cbo.gov)

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Appendix A: Ignite Presentation Slides

Factors Influencing Labor Force Participation

- The labor force participation rate is influenced by both short and long term economic trends. Short-term trends include unemployment rates and business cycles. Long-term trends include **industrialization** and the **accumulation of wealth**.
- The labor force participation rate is calculated as the sum of all employed workers or those actively seeking employment divided by the total **non-institutionalized**, working-age population.
- In March 2020, the U.S. labor participation rate was about 62.7%. Figures had remained around 63% since 2013. **Virginia's labor participation rate is ninth in the US at 67.9%**.
- Labor force participation rate is affected by demographic factors, such as a **change in the working-age population** between generations. The **retirement** of a large number of **baby boomers** reduced labor force participation. In 1995, the share of working-age people in the labor force peaked at 72% and has since fallen to 62.2%.
- The biggest impact on the labor force participation rate in has come from the COVID-19 pandemic. Many people were out of work for a significant amount of time. The labor force participation rate has still not risen to pre-pandemic levels.

Agriculture Summit 4/12/24 [Labor Force Participation Rate by State 2024 \(worldpopulationreview.com\)](#)

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Labor Force Participation

District of Columbia	71.2%
North Dakota	70.5%
Utah	70.4%
Nebraska	70%
Minnesota	69.2%
Iowa	69%
South Dakota	69%
Colorado	68.8%
Virginia	67.9%

Agriculture Summit 4/12/24

How to solve the labor need ...

- Import Product?
- Immigrant Labor?
- Institutionalized labor?
- Scarcity?
- Innovation?

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LAND USE PLANNING & SUCCESSION

Rachel Henley
Working Lands & State Advocacy Specialist
Virginia Farm Bureau

Commonwealth Agriculture Summit - 2024

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Without successful transition there will be no working lands but without working lands there is nothing to transition

HOW CAN WE AVOID?

- **Loss of Working Lands (Farm and Forest) through**
 - Fragmentation/Parcelization
 - Heirs Property
- **Decreasing viability of farm and forest businesses**
- **& many more...**

WHY?

- FOOD PRODUCTION
- PROTECT & PROVIDE CLEAN AIR, SOIL & WATER
- WILDLIFE HABITAT
- COMMONWEALTH'S ECONOMY

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BUSINESS VIABILITY & FAMILY DYNAMICS

- Is it a viable business?
- Goals (personal & biz)?
- Shared values?
- Right people in the right seats?
- Can we discuss these together?
- If not... call in a facilitator or mediator



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BARRIERS & CHALLENGES

- **Land Access/Availability for farmers**
 - specifically young, beginning, next or first generation, minorities, etc.
- **Access to Capital**
 - land values increasing, low federal loan caps
- **Competition for land**
 - development, solar, nutrient banks, etc.
- **Lack of:**
 - transition/succession planning
 - financial literacy/business training
 - knowledge and importance of Working Lands by policy makers and general public
- **Awareness/Marketing for existing programs**
 - business, conservation, and educational
- **Unpredictable/unstable agricultural markets**



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Appendix A: Ignite Presentation Slides

LAND USE PLANNING & SUCCESSION TOOLS & RESOURCES

- **Local, State & Federal Policies & Programs**
 - Comprehensive Plans
 - Zoning
 - 1 to 6 years: Land Use –Value Assessment Program
 - 4 to 10 years: Agriculture & Forestal Districts (AFD)
 - **Perpetuity**, Conservation Easements (ability to sell tax credits) & Purchase of Development Rights (PDR)
 - Loan Programs (FSA)
 - Conservation Programs (SWCD, NRCS)
- **IFTN Certified Farm Succession Coordinators, Mediation, VA FarmLink, VCE & Farm Credit Workshops**

But... we need more tools & resources!

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Virginia Cooperative Extension
Virginia Tech • Virginia State University

Adam Downing
Succession Planning

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LEGACY Planning *aka, death & taxes*

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Landowner goals:

- Intact
- In forest
- In family (ownership)

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Professional Advisors

- Right wicket/right time
- Attorney
- CPA
- Financial advisor

Resource Professionals

- Trusted INSTIGATORS
- Public & private
- Why: viable industry

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Generation NEXT Ignite Planning for Virginia Forest Landowners

through 2023

99% of Participants set plans that include at least one of the following:

- Involvement in succession planning
- Conservation easements
- Buy/Sell Agreements

4.0-6.1 Involvement in succession planning

80% of Participants use the program to create a plan that includes at least one of the following:

- Conservation easements
- Buy/Sell Agreements

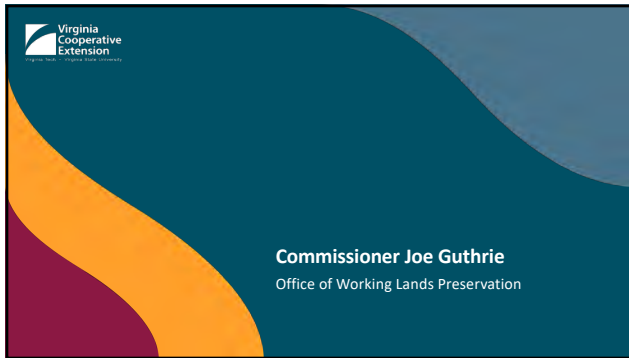
4.8-5.9 Conservation easements

the big WHY?

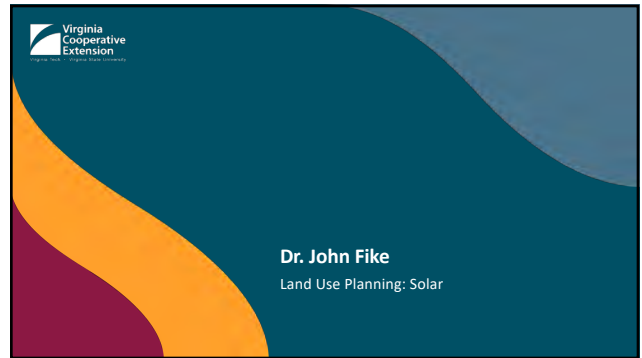
Resource	Families
180,000 Ac (2%)	518 family units (0.1%)

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Appendix A: Ignite Presentation Slides




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Presenter: Nadine Jackson, Program and Grants Coordinator, VSU SFOP

Virginia State University (VSU) Small Farm Outreach Program (SFOP)
Agreement with Alcorn State Policy Research Center, Alcorn State University



to

- 1) Provide heirs property train-the-trainer education to Extension staff, to bring about awareness, and equip them with resources they could provide landowners facing such issues.
- 2) Conduct outreach and education to Under-Privileged Producers to improve their understanding of Heirs Property at the community level.

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Partners building this train-the-trainer model

VSU-SFOP, lead this project. There are three Small Farm Program Assistants whose roles are to refer participant, provide resources, and record efforts.

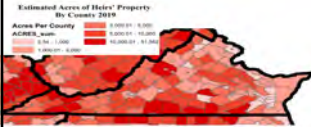
VCE - Mackenzie Gunn, Karen Snapes, and Crysti Hopkins assist with the building of the heirs property train-the-trainer model.

Black Family Land Trust (BFLT) - provides training on heirs property, land protection, estate planning, farm transition and retention strategies; and educate on proactive measures to avoid situations such as land loss or foreclosures.


The Tennie Group provides education relating to taxes, and setting up a business structures.

S. Miller Law Firm inform participants on what is needed before going to see a lawyer.

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Understanding Heirs' Property at the Community Level
https://srdc.msstate.edu/programs/heirs_property




Logos for Alcorn, Southern Extension Management Education, and SRDC are at the bottom.

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Heirs Property Trainings

- VSU- Petersburg, VA
- Danville, VA
- April 16, 2024 Emporia, VA
- May 29, 2024 Tidewater/ Suffolk, VA
- July 10, 2024 Culpepper, VA
- August 28, 2024 New Castle, VA

To register: Visit our events calendar at ext.vsu.edu or vsusmallfarms.com



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