

# A VISION FOR AGRICULTURE'S FUTURE

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A Perspective from CAES Dean and Director, Dr. Nick T. Place





# AGRICULTURE'S ROLE IN OUR LIVES AND ECONOMY

- In 1940, one farmer fed 19 people– today, each American farmer produces food and fiber for over **155 people**.
- Agriculture constitutes **\$100B in exports** annually, making it America's number one export.
- Agriculture employs **more than 24 million Americans**, amounting to 17% of the total workforce.



# IN GEORGIA, THE SOUTHEAST, AND BEYOND

- Georgia's population has nearly doubled since 1985 and is expected to continue
- Food production must increase **70% over current levels** by 2050
- Several states are experiencing **increased drought** with others combating **excessive moisture**
- Producers are experiencing difficulty in obtaining **adequate workforce levels**



# A PIVOTAL TIME FOR OUR FUTURE

**Critical challenges provide  
opportunities for innovation**

- Population growth
- Food systems
- Water issues
- Labor
- Pests and diseases



# HIGHLIGHTING THE LAND-GRANT MISSION

**Agricultural and environmental research has three parts**

- **Basic**, provides the discoveries for solutions to the unknown problems of tomorrow
- **Applied**, which uses the solutions of past basic research to address the problems of today; and
- **Directed**, which delivers immediate actions to improve our agricultural systems.



# UGA'S ROLE IN BRINGING CHANGE

## Leading the Way in Research & Innovation

- Integrative precision agriculture
- Plant genetics and genomics
- Controlled environment agriculture



# INTEGRATIVE PRECISION AGRICULTURE

## Big Data and the Internet of Things

- Ranges from planting and harvesting to animal production and data management
- How can we get the highest yield rate from each acre of land?
- UGA has projects in nearly all segments— Georgia has a diverse agricultural system.



# PLANT GENETICS AND GENOMICS

## Breeding the Future

- Increasing crop yields through breeding optimized varieties
- Addressing climate variability, pests, and disease
- UGA is ranked second in the nation for plant breeding.

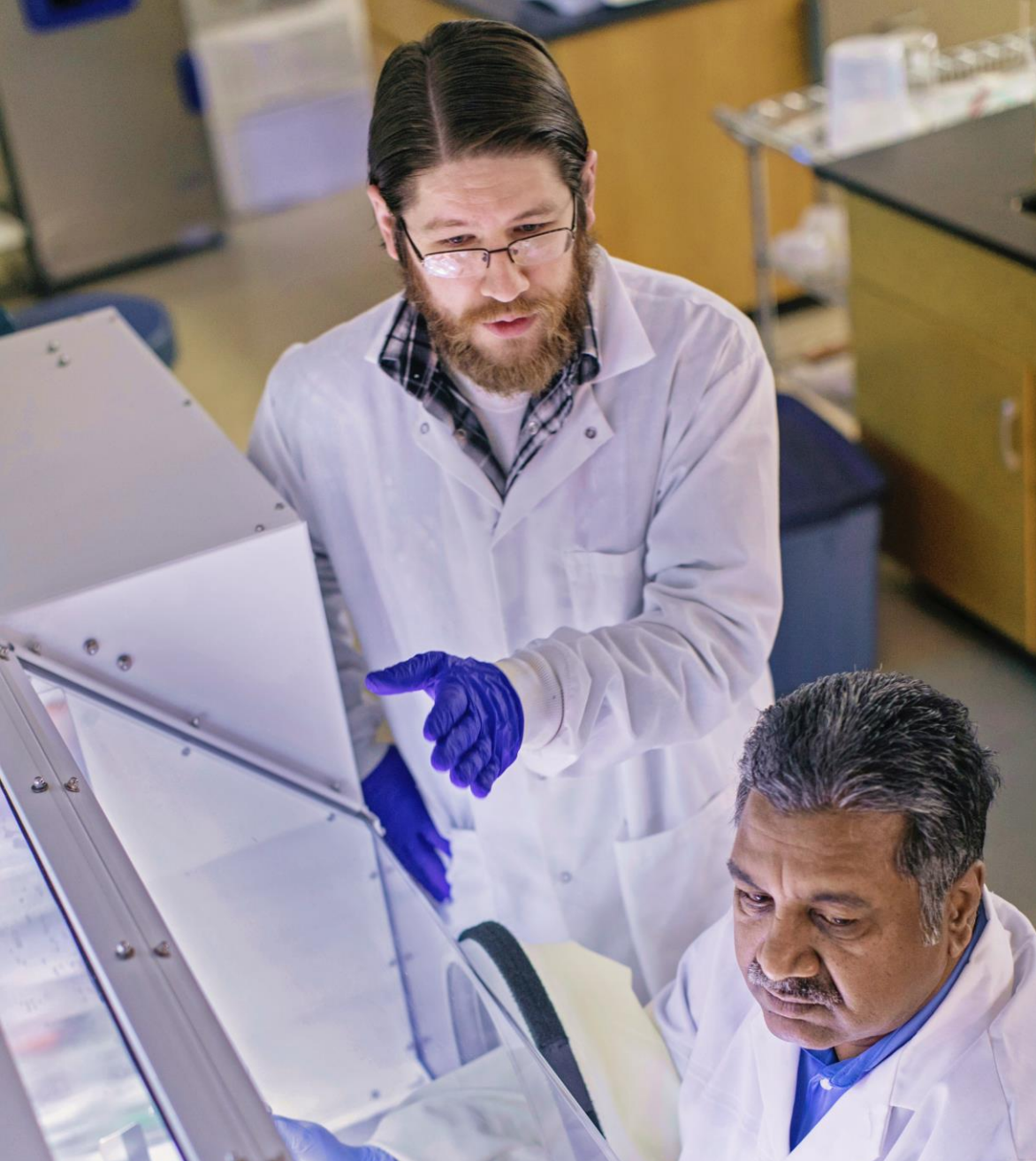




# CONTROLLED ENVIRONMENT AGRICULTURE

## Optimal Growing Conditions

- New technologies like hydroponics and aeroponics
- Those in larger cities want to be closer to food production– controlled environment allows us to do that.
- We are looking for opportunities to elevate and invest in controlled environment production.



# THE BENEFITS OF AG TECHNOLOGY

- Improved efficiency, yield and profitability
- Decreased water, fertilizer and pesticide
- Reduced impact on natural ecosystems
- Increased worker safety
- Safer foods and food systems



# THE FUTURE FOR PEANUTS

## **The leading crop for innovation**

- Peanuts are a versatile, sustainable crop
- Peanut producers tend to be early adopters for precision agriculture technologies
- Peanuts are ideal for combating food insecurity locally and globally



# UGA'S COMMITMENT TO PEANUT RESEARCH

## Breeding and Caring for Peanuts

- UGA Extension agents partnering with producers to mitigate crop issues
- Education for implementation of new technology
- Creating a more disease-resistant plant
- Exploring the potential in wild peanut varieties



# VISIONING THE FUTURE

## Where do we go from here?

- These challenges are opportunities– to grow, to change, and to succeed.
- We get to train the next generation of producers, researchers, scientists, and managers.
- There is room for investment.
- CAES is poised to lead the way.



# ACHIEVING CONTINUED SUCCESS WITHIN CAES

- Increase our research funding levels
- Elevate graduate education
- Invest in and improve our infrastructure
- Support faculty in continued success
- Connect with stakeholders to address needs
- Foster an entrepreneurial spirit
- Build a culture of service and philanthropy
- Engage our alumni and encourage community

# THANK YOU

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