Call to Order

Dean Karen Plaut called the meeting to order at 3:04 PM.

Change in the order of the agenda—item #3 Shared Governance will now be item #7 to allow for Deb Nichols to attend virtually.

Approval of Agenda

Jeff Holland introduced a motion to approve the modified agenda. Mark Russell seconded the motion. The agenda was approved by vote using an online poll in Zoom (46 “yes” votes with the rest not voting).

Announcement of College of Agriculture Faculty Awards – John Lumkes

- Pfendler Outstanding Advisor—J. Barny Dunning, FNR
- Outstanding Graduate Mentor and Teacher—Nicole Widmar, AGEC
- Outstanding Service to Students—Amy Cochran, AGEC
- Outstanding Teacher for Clinical Faculty & Continuing Lectures—Mitch Zischke, FNR
- Kohls Outstanding Early Career Teacher—Sarah LaRose, ASEC
- Kohls Outstanding Teacher—Mark Tucker, ASEC

John Lumkes thanked the Awards Committee and congratulated the nominees.

The Awards PowerPoint, with all awards and nominees, is appended to the end of these minutes.

Consent Agenda – Action Items

Items on the consent agenda were considered. Dean Plaut asked if anyone wished to remove any item from the consent agenda for additional discussion. Ron Turco asked to remove Document VII, Part B – Curriculum Changes to Sustainable Food and Farming Systems. Steve Hallett moved to approve. Gerald Shively seconded the motion and it was passed.

Motion to vote on Document VII, Part B was made by Linda Prokopy and seconded by Steve Hallett.
**Discussion**

Ron Turco raised concern about the removal of AGRY 10500 from Sustainable Food and Farming Systems (SFS). He stated he is raising the objection, but removing the course as an option is a decision the Department of Horticulture and Landscape Architecture can make. Steve Hallett, Program of Study Coordinator for SFS, replied that HORT 10100 or AGRY 10500 have the options and students have not taken the Agronomy course. He added that students could still take AGRY 10500, but would not be listed on the plan of study. Dennis Buckmaster commented on the number of free electives in the SFS major and cautioned all departments to think about what we want to guarantee to students and potential employers when we have a major with 22 [free] electives.

Motion to call the end of questions was made by Mike Dana and seconded by Mark Russell.

Document VII, Part B was approved by a vote of 31 to 1, with 1 abstention.

**Memorial Resolutions**

A memorial resolution was presented for Harrison L. Flint by Linda Prokopy.

A moment of silence was observed in remembrance of this emeritus member of the faculty. A copy of the resolution is appended to these minutes.

**Report Items**

**University Senate Report – Robert Pruitt**

Colleen Brady presented the report for Bob. Colleen stated that there will be a change of J-term to Winter Flex and that there will now be a category for Diversity, Equity, and Inclusion when looking at Faculty promotion documents. See report that is appended to these minutes.

**Dean’s Report – Dean Karen Plaut**

Dean Plaut began by highlighting the College of Agriculture (CoA) Strategic Plan which was completed about one year ago. The College wants to address global challenges, make education available to all, nurture our people, champion diversity, equity, and inclusive excellence, prepare graduates with comprehensive and transformational learning, and engage with local and global communities.

Dean Plaut then highlighted recent rankings for the College and University including being named Top 10 Best Public Institution in the US, Top 10 Most Innovative, #4 for Student Engagement, and #7 for Best Value. The CoA is ranked #7 in the United States and #15 in the world according to the QS rankings. Enrollment is 2,791 undergraduate and 769 graduate students. We have a 7% increase in new students and 15% increase in transfer students. Our Underrepresented Minority numbers (9.8% undergraduates and 14% graduate students) are mainly due to LatinX as we have not done as well with Black student enrollment.

Karen then recognized that the CoA has had record research awards at $76 million for the past year. Our scholarships are at $2.4 million which is really a tribute to our donors. We have 10 endowed chairs. The Global Ag Innovation Forum through Jerry Shively’s office has had 2,500 registrants from 125 counties!

Dean Plaut also recognized notable undergraduates including Johnnie (Junior) Chang (Leadership in Action Award) and Kyle Albertson (Tyler Trent Award). Sylvie Brouder and Dominique van der Mensbrughe were appointed to the EPA’s Scientific Advisory Board. Kimber Nicoletti-Martinez received the 2021 Jefferson Award for Outstanding Public Service. Jackie Boudreaux received Purdue’s
Leadership in Action award. Haley Oliver received Purdue’s 150th Anniversary Teaching award. Karen then discussed the new faculty and department heads as well as the list of faculty searches.

Dean Plaut then discussed the goal of moving forward in the area of Inclusive Excellence. Many departments have completed the Intercultural Development Inventory. The Office of Multicultural Programs (OMP) is working on an Inclusive Excellence continuum which will soon be vetted with faculty and staff. OMP received a grant of $250,000 to develop professional development workshops, professional and peer mentoring, and an annual leadership conference. OMP also received $400,000 for recruitment of diverse students through PASA summer programs, etc. The college also recruited 10 of 11 emerging leader undergraduate scholars. Two students, Amira Haweit and Nira Grinheim, won MANRRS awards.

Dean Plaut went on to discuss Purdue Extension and its role in community development, health & human sciences, agriculture & natural resources, and 4-H & Youth Development. In the area of Partnership & Innovations, Dennis Buckmaster continues to promote Digital Ag. Haley Oliver is working to lead globally through her work in food security. We also have a new Food Science pilot plant where we can solve real world problems. Multidisciplinary projects include EMBRIO (Emergent Mechanisms in Biology of Robustness, Integration, & Organization) and a project focused on Farm Level Diversity, Market Level Diversity, and Landscape Level Diversity. Christian Butzke is heading up the CoA Innovation and Entrepreneurship Ambassadors to help faculty in the areas of innovation and entrepreneurship.

Dean Plaut highlighted that Purdue Agriculture will be the home to the 2021 National Thanksgiving turkeys named Peanut Butter and Jelly. They were grown in Indiana and were already pardoned by President of the United States, Joe Biden.

She went on to talk about Purdue’s Next Moves—Plant Sciences 2.0. Looking at big data and the importance of big data as we move forward. The CoA is making progress in Digital Forestry and Plant Sciences as well as real time data from the Center for Food Demand & Sustainability which highlights food and beverage industries’ vulnerability to Covid-19. As the CoA looks to the future it is about workforce readiness and entrepreneurship. Another Next Moves is Digital Innovation in Agrifood Systems Laboratory (DIAL) which brings new ideas to market, new ways to think about innovation and how we can create our own pipeline in the digital space. Allan Gray is leading the DIAL effort. Also, as we look to the future it is about living our strategic plan by addressing research and Extension throughout the state, country, and world; developing digital tools, enhancing research opportunities, actively recruiting students, developing cost effective Online programs, investing in new facilities, championing inclusive excellence, and providing global leadership through learning and engagement.

Dean Plaut then opened up the meeting for questions. There were none.

Dean Plaut’s presentation is included in the document that is appended to these minutes.

**Shared Governance Report – Deborah Nichols, University Faculty Senate**

Joe Anderson, Agenda & Policy Chairperson introduced Deb Nichols as past chair of the University Senate and the individual overseeing Shared Governance effort.

Deb began by discussing the history of the project. In June 2020 the task force began meeting weekly with University leaders to discuss Covid-19 and what we could do if Purdue changed our model of shared governance. She added that everyone has equal footing and we learned a great deal about faculty and staff issues, along with graduate student and undergraduate issues. Wanted to be able to engage a wider set of faculty voices, and to include groups that have not been historically involved, e.g. CSSAC and
APSAC/MAPSAC. Currently, 92 of 102 voting members of University Senate are faculty; the undergraduate and graduate groups have one vote each. Since the model was dominated by faculty votes, the task force wanted to give others equal representation. Deb stated the task force recognized that not everyone wants to serve on the University Senate, but there should be opportunities available.

Deb discussed a staff survey from January 2020 where results were never disseminated or discussed, which left staff wondering if their voices were being heard. Came up with four key objectives: (1) engage a wider set of faculty voices, (2) create opportunities for participation in shared governance by groups that have been historically uninvolved, (3) develop intentional collaboration across stakeholders, and (4) multiple opportunities to engage stakeholders effectively. These objectives will be accomplished through four values: (1) Effective shared governance is characterized by open and constructive communication, (2) For shared governance to work, it must be based on a culture of engagement, (3) Institutional policies that define shared governance should be reviewed periodically to ensure their currency, applicability, and accountability, and (4) Meaningfully encourage, recognize, and incentivize shared governance participation.

Deb went on to discuss the working plan. The task force solicited volunteers for five working groups with a timeline of October 2021 to April 2022. The working groups are: (1) Accountability, (2) Staff, Student, and Other Voices, (3) Structural Model for Shared Governance, (4) Engagement & Social Media Tools, and (5) Cultural Change. Deb pointed out that the task force has an email and website where individuals can submit suggestions, changes, etc.

Deb then took questions.

Joe Anderson asked—Does the central council reduce the weight of faculty decisions outside of curriculum?
Deb replied—The way the structure will be set up, faculty focused council would do what they normally do in the senate and the rep from university council would take items to the senate and vice versa.

Jerry Shively asked—Do you envision this new task force replacing the Faculty Senate or would they work side by side?
Deb replied—The task force would not replace Faculty Senate. Right now we have University Council and it does not represent everyone on campus. These councils would make sure to represent everyone on campus.

Linda Prokopy asked—Could we try to tweak what currently exists rather than making wholesale changes?
Deb replied—We have tried tweaks and it doesn’t work. After experiencing the pandemic, the majority of students didn’t know where decisions came from; we found the new structure disseminated information quickly and more effectively.

**Adjournment**

Senay Simsek made a motion to adjourn the meeting. Steve Hallett seconded the motion and it passed unanimously. The meeting was adjourned at 4:29 PM.

**Video Recording**

A video recording of the meeting can be found here: https://app.box.com/s/o8yfgfhdypnphameddqs7tipn40ssie Please note, the recording was not started until we began discussing the Consent Agenda which means the first 20 minutes of the meeting are absent.
Next Meeting

The 2022 Spring Semester Agricultural Faculty meeting is scheduled for 3:00 PM on Thursday, March 24.

Respectfully Submitted,

Timothy P. Kerr
Secretary, Agricultural Faculty
2021 AWARDS FOR

FACULTY & STAFF

COLLEGE OF AGRICULTURE
DAVID C. PFENDLER OUTSTANDING UNDERGRAD COUNSELOR

- Kari Clase, Agricultural & Biological Engineering
- Mitch Tuinstra, Agronomy
- Vikki Weake, Biochemistry
- Mike Mickelbart, Botany & Plant Pathology
- Barny Dunning, Forestry & Natural Resources
- Aaron Thompson, Horticulture & Landscape Architecture
NOMINEES

OUTSTANDING GRADUATE MENTOR & TEACHER

- Nicole Widmar, Agricultural Economics
- Shalamar Armstrong, Agronomy
- Allen Talbert, Ag Sciences Education & Communication
- Natalia Dudareva, Biochemistry
- Mary Catherine Aime, Botany & Plant Pathology
- Ian Kaplan, Entomology
- Douglass Jacobs, Forestry & Natural Resources
- Lori Hoagland, Horticulture & Landscape Architecture
NOMINEES

OUTSTANDING SERVICES TO STUDENTS

- Laurie Snyder, Agricultural & Biological Engineering
- Amy Cochran, Agricultural Economics
- Jane Wiercioch, Agronomy
- Melissa Geiger, Ag Sciences Education & Communication
- Lisa Gross, Botany & Plant Pathology
- Amanda Wilson, Entomology
- Vicki Stirm, Horticulture & Landscape Architecture
NOMINEES

OUTSTANDING TEACHER FOR CLINICAL FACULTY & CONTINUING LECTURERS

- Robert Stwalley, Agricultural & Biological Engineering
- Corey Gerber, Agronomy
- Kevin Smith, Ag Sciences Education & Communication
- Jeneen Fields, Botany & Plant Pathology
- Mitch Zischke, Forestry & Natural Resources
RICHARD L. KOHLS OUTSTANDING EARLY CAREER TEACHER

- Brady Brewer, Agricultural Economics
- Sarah LaRose, Ag Sciences Education & Communication
- Jen Wisecaver, Biochemistry
- Scott McAdam, Botany & Plant Pathology
- Ying Li, Horticulture & Landscape Architecture
NOMINEES

RICHARD L. KOHLS OUTSTANDING UNDERGRADUATE TEACHER

- John Lee, Agricultural Economics
- Keith Johnson, Agronomy
- Mark Tucker, Ag Sciences Education & Communication
- Mark Hall, Biochemistry
- Bryan Young, Botany & Plant Pathology
- Douglas Richmond, Entomology
- Sean Rotar, Horticulture & Landscape Architecture
Harrison Flint, Purdue University Professor Emeritus of Horticulture, died on 11 April, 2021. Respected as both scholar of woody plants and inspiring educator, his passing is mourned by his family, colleagues, and students.

Over his near 30-year career at Purdue University (1968 – 1997), Harrison advised over 300 horticulture undergraduates, including some 150 in a special program he created called the Professional Plantsman (PLANTPRO) and later renamed the Public Horticulture major. These and other students he adopted went on to populate gardens, arboreta, universities, and other institutions across North America and beyond.

Professor Flint instructed several classes at Purdue, including one on planting design (co-taught with Landscape Architecture faculty), as well as a non-technical, horticulture writing course. However, it was HORT 217 – Woody Landscape Plants – for which he was best known. This arduous yet rewarding class taught 1000s of horticulture, landscape architecture, and urban forestry students not just to identify trees and shrubs (often when leafless), but also their stress tolerances, landscape usage, and cultural histories. For those wanting more, there was HORT 527 – Advanced Woody Plant Systematics – which required deep-thinking, independent scholarship, and a great deal of writing.

Harrison was a prolific author in popular and trade magazines, often recommending plants of merit to horticulture. One of his several books (Landscape Plants for Eastern North America) became a respected textbook and go-to reference for landscape architects and horticulturists. In its 2nd edition, it continues to be held in high regard for Flint’s trustworthy, objective assessments. He dedicated the book to his students. His counsel to the nursery and landscape industries, as well as the public gardens community, was often sought out and always respected.

Flint’s keen understanding of woody plants’ stress tolerances was borne out of his own experiences as a scholar. Much of his and his graduate students’ research focused upon cold hardiness in trees as a function of provenance, integrating ecological perspectives into horticulture.

The antithesis of a self-promoter, Harrison was a modest man who expressed clear interest in other’s well-being and a strong dedication to social issues. While on sabbatical he partnered with Alabama A&M University to find ways to strengthen minority representation in the field of horticulture; while on another sabbatical at Iowa State University, he delved into agricultural bioethics. Harrison received multiple awards for his teaching and advising. In 2002 he was honored with the prestigious Arthur Hoyt Scott Medal from Swarthmore College, the pinnacle in American horticulture. That same year, accepting the American Public Gardens Association’s Award of Merit, he emphasized to conference attendees how public gardens must exist for all, not just prominent donors and those who could afford admission fees.

Harrison Leigh Flint, a native Vermonter, received his BS and PhD from Cornell University, and his MS from Michigan State University, all in horticulture. Prior to joining the faculty at Purdue University, he was on the faculties of the University of Vermont and University of Rhode Island.
Senate Update for College of Agriculture Faculty Meeting

December 1, 2021

Educational Policy Committee (EPC) and Faculty Affairs Committee (FAC) are working with Administration on the Winter Flex calendar suggestion and a Senate vote is anticipated in the early spring. If you have not completed the WinterFlex survey from the Provost’s office, please do so. The WinterFlex proposal was not designed by the Senate, but EPC and FAC were consulted during its development.

The Senate rejected a proposal from Purdue Student Government (PSG) to make Election Day a non-class day of service (https://www.purdue.edu/senate/documents/meetings/Senate-Document-20-57.pdf), but it did pass a modification from PSG regarding mid-semester grade updates (https://www.purdue.edu/senate/documents/meetings/Senate-Document-20-58.pdf). That goes into effect for the Spring. In summary, it is that course instructors should be providing students the grading scale and information for where they are at least once before the end of the semester.

Senate also passed a Document underscoring that there needs to be an explicit category for discussing candidates Diversity, Equity and Inclusion efforts in promotion and tenure documents (https://www.purdue.edu/senate/documents/meetings/Senate-Document-20-56.pdf). Finally, proposals about allowing medically excused class absence and a mental health action week were discussed in November and will be voted on in January – please share any thoughts about these initiatives with your Senators. All agendas and documents are available on the Senate website. https://www.purdue.edu/senate/meetings/2021-22/September-13.php

November 18, 2021

Dear Faculty,

Based on feedback from the University community, we are not pursuing the original January Term idea, and are now exploring an alternative that preserves the positive elements of the January Term proposal, while addressing the concerns expressed by faculty, staff, and students. As an alternative to January Term, we are exploring a four-week Winter Flex term between the end of the fall semester in mid-December and the start of the spring semester in mid-January. Related to this idea, we
are also exploring faculty preferences around the length of our semesters: 15 weeks vs. 16 weeks.

During the proposed Winter Flex term, students would have the opportunity to participate in Study Abroad and take asynchronous courses online in an accelerated format – on-campus courses would not be held. Participation in the Winter Flex term would be completely optional for all students, faculty, and instructors. A Winter Flex term would offer students more flexible opportunities for winter Study Abroad and to take asynchronous online classes: required courses, elective courses, courses to get ahead or to catch up, or courses to explore exciting new areas. Faculty would have the opportunity to develop new study abroad offerings and creative on-line courses, again, at their discretion.

The Winter Flex proposal and associated calendars may be found online at https://www.purdue.edu/provost/about/provostInitiatives/winter/.

We would appreciate your perspectives on this proposal by completing the survey below, and especially your thoughts on the length of our Fall and Spring semesters.

To access the survey, click here.

Kristina Wong Davis, Co-Chair
Vice Provost for Enrollment Management

Marion Underwood, Co-Chair
Dean, College of Health and Human Sciences

Jay Akridge
Provost and Executive Vice President for Academic Affairs and Diversity
COLLEGE OF AGRICULTURE

Karen Plaut
Glenn W. Sample Dean of Agriculture
12/1/2021
We:

- address global challenges.
- make education available to all.
- nurture our people.
- champion diversity, equity and inclusive excellence.
- prepare graduates with comprehensive and transformational learning.
- engage with local and global communities.
Purdue University

National and World Rankings

• **Top 10** Public University in the U.S.  
  (Wall Street Journal/Times Higher Ed 2022)

• **Top 10** Most Innovative U.S. University  
  (U.S. News & World Report 2022)

• **#4** Best for Student Engagement  
  (Wall Street Journal/Times Higher Ed 2022)

• **#7** Best Value Institute in U.S.  
  (Wall Street Journal/Times Higher Ed 2022)
#7 in US
#15 in the world
Agriculture and Forestry

- 2,791 Undergraduates, 769 Graduate Students
- 7% increase in new students & 15% increase in transfers
- 9.8% of US resident undergraduates are URM
- 14% of US graduate students are URM
- 96% of graduates employed; $48,337 average starting salary

Excelling in Our Land-Grant Mission

- Record Research Awards in FY20 - $76.1 M
- 67% Increase in Extension Engagement in FY20 – 620,000 attended learning events
- $2.4M in Scholarships Awarded to 1,390 Undergraduates for 2021 -2022
- 10 New Endowed Chairs
- 2,500 registrants from 122 countries for Global Ag Innovation Forum

#1 Undergraduate & Graduate Programs in Ag & Biological Engineering
Student Awards
Leading the University…Last 10 Years
• France Cordova Leadership in Action—10
• G.A. Ross Outstanding Sr. Man—4
• Flora Roberts Outstanding Sr. Woman—3
• Tyler Trent Courage & Resilience—2 out of 3

Faculty & Staff Honors

Johnnie (Junior) Chang
Leadership in Action

Kyle Albertson
Tyler Trent Award
- Food and Bioprocess Engineering, Ag and Biological Engineering
- State and Local Finance, Agricultural Economics
- Ag Business Marketing, Agricultural Economics
- Agroecology/Soil Health, Agronomy
- Geospatial data scientist, Agronomy
- Quantitative Genomics, Animal Science
- Biochemical Pathways and Metabolism, Biochemistry
- Produce Food Safety, Food Science (targeted hire)
- Sustainable Horticulturist, Horticulture and Landscape Architecture
- Controlled Environment Ag, Horticulture and Landscape Architecture (Opportunity hire)
- Quantitative Plant Biologist, Center for Plant Biology
- Assistant Director for Agriculture and Natural Resources, Extension
- Department Head, Agricultural Sciences Education and Communication
- Department Head, Forestry and Natural Resources
Inclusive Excellence

- College will complete Intercultural Development Inventory and have summary by Summer 2022
- Inclusive Excellence continuum—will be vetted with faculty and staff soon
- Investment from Farm Credit Services of Mid-America
  - $250,000 Awarded to the Office of Multicultural Programs to develop professional development workshops, professional and peer mentoring, and an annual leadership conference.
  - $400,000 from Cargill for recruitment of diverse students though PASA summer programs etc.
- Recruited 10 of 11 emerging leader undergraduate scholars
Purdue Extension Indiana’s Educational Partner for Life

Agriculture & Natural Resources

Health & Human Sciences

Community Development

4-H & Youth Development
Partnerships and Innovation Lead to Impact

Leading in digital ag/data science

Partnering with industry

Demonstrating practical applications

Leading globally in food security

Students solving real world problems

Creating new opportunities

Orange Corn Meal

5 stars

$11.99

Orange Corn Grits

5 stars

$12.99
Multidisciplinary Research Projects

National Science Foundation-funded Institute

‘EMBRIOS’
Emergent Mechanisms in Biology of Robustness, Integration & Organization

purdue.edu/research/embrio

National Institute of Food and Agriculture-funded project

Farm Level Diversity
Potentially incorporating the following into the system:
- Small grains and/or forage crops in rotations
- Perennial forage or bioenergy crops
- Agroforestry
- Horticultural food crops
- Grazed livestock

Market Level Diversity
- Diversity of markets for both producers and consumers
- Needs of diverse people along the value chain are met

Landscape Level Diversity
- Wide-scale adoption of alternative farming systems that are climate-smart, reach profit and yield goals and ecosystem services goals leading to resilient intensification
- Systems and services are equitably distributed
College of Agriculture appoints Innovation & Entrepreneurship Ambassadors
Fun College Fact

Purdue Agriculture home to 2021 National Thanksgiving Turkeys

Turkeys named Peanut Butter and Jelly were grown in Indiana and pardoned by the President of the US
PURDUE'S NEXT
MOVES

PLANT SCIENCES 2.0
Making Progress in Digital Forestry and Plant Sciences

Tree detection and segmentation results at Martell Forest

Sample backpack LiDAR dataset provided by the Digital Photogrammetry Research Group.

Enhancing soybeans’ efficiency at utilizing atmospheric nitrogen through

Using hyperspectral imaging to determine uptake of toxic metals such as Cadmium by plants
FOOD AND BEVERAGE INDUSTRIES' COVID-19 VULNERABILITY INDEX BY U.S. STATES AND COUNTIES

COVID-19 Vulnerability Index, Food & Beverage Manufacturing Industries, by U.S. States & Counties

Estimated Vulnerable Production (last 365 days)

<table>
<thead>
<tr>
<th>County</th>
<th>State</th>
<th>Vulnerable Production 365days</th>
<th>Vulnerable Production 360days</th>
<th>COVID Cases 365days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autauga</td>
<td>Alabama</td>
<td>$1,934,770</td>
<td>$1,355,517</td>
<td>8,074</td>
</tr>
<tr>
<td>Baldwin</td>
<td>Alabama</td>
<td>$4,105,711</td>
<td>$0</td>
<td>30,407</td>
</tr>
<tr>
<td>Barbour</td>
<td>Alabama</td>
<td>$12,377,735</td>
<td>$434,081</td>
<td>2,530</td>
</tr>
<tr>
<td>Blount</td>
<td>Alabama</td>
<td>$7,377,073</td>
<td>$494,270</td>
<td>8,237</td>
</tr>
<tr>
<td>Bolivar</td>
<td>Alabama</td>
<td>$2,972,658</td>
<td>$55,049</td>
<td>866</td>
</tr>
<tr>
<td>Calhoun</td>
<td>Alabama</td>
<td>$2,761,232</td>
<td>$134,923</td>
<td>17,355</td>
</tr>
<tr>
<td>Chambers</td>
<td>Alabama</td>
<td>$2,259,270</td>
<td>$81,622</td>
<td>4,336</td>
</tr>
<tr>
<td>Chilton</td>
<td>Alabama</td>
<td>$461,670</td>
<td>$0</td>
<td>4,838</td>
</tr>
<tr>
<td>Clarke</td>
<td>Alabama</td>
<td>$608,562</td>
<td>$0</td>
<td>3,170</td>
</tr>
<tr>
<td>Clay</td>
<td>Alabama</td>
<td>$2,733,315</td>
<td>$42,059</td>
<td>1,679</td>
</tr>
<tr>
<td>Cullman</td>
<td>Alabama</td>
<td>$1,140,248</td>
<td>$373,213</td>
<td>1,857</td>
</tr>
<tr>
<td>Coffee</td>
<td>Alabama</td>
<td>$16,972,922</td>
<td>$499,089</td>
<td>7,390</td>
</tr>
<tr>
<td>Colbert</td>
<td>Alabama</td>
<td>$1,095,160</td>
<td>$33,234</td>
<td>6,792</td>
</tr>
<tr>
<td>Conecuh</td>
<td>Alabama</td>
<td>$308,103</td>
<td>$0</td>
<td>1,303</td>
</tr>
<tr>
<td>Covington</td>
<td>Alabama</td>
<td>$374,190</td>
<td>$0</td>
<td>4,862</td>
</tr>
<tr>
<td>Crenshaw</td>
<td>Alabama</td>
<td>$384,745</td>
<td>$0</td>
<td>1,885</td>
</tr>
<tr>
<td>Cullman</td>
<td>Alabama</td>
<td>$3,525,625</td>
<td>$584,011</td>
<td>12,777</td>
</tr>
<tr>
<td>Dale</td>
<td>Alabama</td>
<td>$996,103</td>
<td>$0</td>
<td>6,962</td>
</tr>
<tr>
<td>Dallas</td>
<td>Alabama</td>
<td>$1,891,466</td>
<td>$248,050</td>
<td>5,272</td>
</tr>
<tr>
<td>Dekalb</td>
<td>Alabama</td>
<td>$8,758,186</td>
<td>$339,432</td>
<td>8,062</td>
</tr>
<tr>
<td>DeSoto</td>
<td>Alabama</td>
<td>$3,661,314</td>
<td>$0</td>
<td>12,167</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>$26,165,593.42</strong></td>
<td><strong>$1,853,430.7</strong></td>
<td><strong>84</strong></td>
</tr>
</tbody>
</table>

All States

219,425
Expected Industry Workers with COVID19 (last 365 days)

15,435
Expected Industry Workers with COVID19 (last 30 days)

1,953,171
Industry Jobs

49,106
Payrolled Establishments

Source: Center for Food Demand Analysis & Sustainability (CFDAS) at Purdue University, and Department of Agricultural Economics at Purdue University.

Data Sources: (1) EMSI - economicmodeling.com [for 2019 data on Gross Regional Product, Payrolled Establishments, Industry Jobs, Population], (2) JHU CSSE COVID-19 Data [for data on COVID-19 cases]

Disclaimer: This work was financially supported by a grant from the Foundation for Food and Agriculture Research under award number – Grant ID: DS2ow-000000017. The content of this tool is proprietary.

purdue.ag/CFDAS
LEADING US INTO THE FUTURE

IN WORKFORCE READINESS
The idea:
Provide a diverse & data-savvy workforce for the agriculture, food and forest industries.

Progress:
• Hired 13 post-docs and 29 grads from 7 different disciplines
• Hired 4 research scientists
• Hired a program manager

IN ENTREPRENEURSHIP
The idea:
Launch innovative ideas into the marketplace where they can improve lives.

Progress:
• 18 companies for AgCelerator competition
• 10 Inaugural Faculty Entrepreneurship Ambassadors
PURDUE'S NEXT
MOVES

DIGITAL INNOVATION IN AGRIFOOD SYSTEMS LABORATORY
DIAL Venture Studio Inspired Model

Fellows

September through April

Needs Identification

Concept Acceleration

Concept Validation

Venture Incubation

Founders of NewCo’s

3 to 5 Years to Exit

Implementation Partners
- EY Innovation Studio for Food
- High Alpha Innovation

PURDUE UNIVERSITY
College of Agriculture
Looking to the Future – Living our strategic plan

- Address applied research and Extension throughout the state, county and world
- Work with multi-disciplinary teams to enhance research opportunities
- Actively recruit students
- Develop cost effective Online Programs
- Invest in New Facilities
- Champion Inclusive Excellence
- Support Entrepreneurship
- Provide global leadership through discovery, learning and engagement

Large-scale Datasets – Only 1 Farm

<table>
<thead>
<tr>
<th>Source</th>
<th>Records</th>
<th>Variables</th>
<th>Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afimilk</td>
<td>45,012,788</td>
<td>48</td>
<td>2,160,613,824</td>
</tr>
<tr>
<td>Dairy Comp</td>
<td>6,462,568</td>
<td>91</td>
<td>120,601,442</td>
</tr>
<tr>
<td>Foerster-Technik</td>
<td>1,131,436</td>
<td>25</td>
<td>28,285,900</td>
</tr>
<tr>
<td>Lely</td>
<td>60,600,465</td>
<td>74</td>
<td>4,484,434,410</td>
</tr>
<tr>
<td>Zoetis</td>
<td>474,536,090</td>
<td>23</td>
<td>10,914,330,070</td>
</tr>
<tr>
<td>Total</td>
<td>~600 million</td>
<td>261</td>
<td>~17 Billion</td>
</tr>
</tbody>
</table>

THE DATA MINE + Beck’s Hybrids
Questions?