

# DENNIS L. BROTHERS

## APPOINTMENT

- 100% Extension Appointment – 20011 to present

## WORK EXPERIENCE

- Auburn University, Associate Extension Professor - 2019 to Present
- Auburn University, Assistant Extension Professor – 2019
- Auburn University, Extension Specialist – 2011 to 2019
- Alfa Insurance, Commercial Poultry Claims Specialist - 2007 to 2011
- Gold Kist Poultry Inc., Broiler Supervisor, Housing Coordinator – 1999 to 2007
- Alabama Farmer’s Cooperative - 1996 to 1999

## EDUCATION

- Master of Agriculture, Agricultural Economics, Auburn University – 1996
- Bachelor of Science, Animal and Dairy Science, Auburn University - 1994

## EXTENSION PROGRAM SUMMARY

My career at Auburn University began by joining the Alabama Cooperative Extension System (ACES) as a poultry housing specialist with the National Poultry Technology Center in 2011 and has continued, having been merged into the Department of Agricultural Economics and Rural Sociology in 2019 to the present. My extension program is primarily focused on the commercial poultry industry. My years working in that industry combined with continuous personal communication with industry leaders, active growers, grower groups, and allied industry personnel identifies the needs of my clientele and directs my efforts. These needs have included helping growers apply emerging technology and assessing its impact on farm profitability, examining and improving grower risk management strategies, and improving the overall well-being of the contract poultry farm. Meeting these needs at the farm level ultimately serves the poultry companies’ wellbeing as well and improves the industry at large. In summary, my job is focused on helping contract poultry growers succeed in businesses any way I can.

## AWARDS (7 Total)

College Level (3)  
State Level (2)  
National Level (2)

## EXTENSION PRESENTATIONS

– including guest lectures (198 Total)

ACES Presentations (81)  
Invited Presentations (65)  
Webinars (13)  
Extension Videos (12)  
Podcast / Social media / Other (14)  
Guest lectures (13)

## EXTENSION PUBLICATIONS (97 Total)

Refereed Journal Articles (3)  
ACES Peer Reviewed Articles (12)  
Other Peer Reviewed Articles (17)  
Newsletters/Information Pieces (20)  
Timely Topic Articles (11)  
Popular Press Articles (34)

## EXTENSION FIELD DEMONSTRATIONS / RESEARCH PROJECTS LED (14 Total)

## EXTENSION FUNDING ACTIVITY (\$649,445 Total)

## 1. Awards

- 2025 - Auburn Authors Award – Auburn University  
\*Co-authored “Agriculture & Forestry Grow Alabama: An Economic Contribution Study” with Adam Rabinowitz
- 2024 - Alabama Farmers Federation – Duncan Award for Excellence in Production Agriculture & Forestry Extension  
\*Farmer member nominated award for service benefitting the farmers/growers of Alabama
- 2023- Southern Agricultural Economics Association - Outstanding Extension Program Award  
\*Association member nominated award recognizing impactful extension programs from the southern association states – specifically, Commercial Poultry Grower Extension
- Alabama Association of County Agricultural Agents, Search for Excellence in Farm and Ranch Management, State Winner  
\*Association member nominated award recognizing extension programs focused on farm management - specifically, “The New Farmer’s Guide to Commercial Broiler Industry.”
- National Association of County Agricultural Agents and Specialists, Search for Excellence in Farm and Ranch Management, National Finalist  
\*Association member nominated award recognizing extension programs focused on farm management - specifically, “The New Farmer’s Guide to Commercial Broiler Industry.”
- 2017 - Auburn University, College of Ag. – Excellence in Extension and Outreach Award (Junior)  
\*College of Agriculture award recognizing cumulative work impact in extension and outreach.
- 2011 - Auburn University, College of Ag. – Project Team Award – National Poultry Technology Center  
\*College of Agriculture award recognizing work done as a member of a team within the university.

## **2. Presentations, Multi-media**

### **2.1 Alabama Cooperative Extension System Presentations, 2011 – Present (all 100% contribution)**

#### **2.1.1 ACES Seminars/Presentations, In-state Audience:**

1. “Commercial Poultry 2024 Outlook: Markets, Legal, Contracts, HPAI”, Annual Alabama Agriculture Outlook, Montgomery, AL, December 13, 2023
2. “Alabama Poultry Outlook” Annual Alabama Agriculture Outlook, Montgomery, AL, February 2023
3. “Poultry Industry Outlook”, Farm Agribusiness Management Extension Team Agriculture Outlook, 1/14/22 – Jackson County, 1/25/22 – Enterprise, 2/8/22 – Fayette, 2/10/22 – Lauderdale County, AL
4. “Poultry Industry Outlook for ‘23”, Annual Alabama Agriculture Outlook, Montgomery, AL, December 15, 2022
5. “Commercial poultry economics, SAS demo tour, Rainwater Harvesting demo tour”, Farm and Agribusiness Management Team In-service Meeting, Cullman, AL, May 10, 2021

6. "Commercial Poultry Outlook 2022", Annual Alabama Agriculture Outlook, Montgomery, AL, December 14, 2021
7. "Rainwater Harvesting/Solar for Poultry", Auburn College of Ag. Student Educational Tour, Cullman, AL, March 9, 2020
8. "Commercial Poultry Outlook for 2020", Annual Alabama Agriculture Outlook, Montgomery, AL, December 10, 2019
9. "Commercial Poultry Outlook for 2019", Annual Alabama Agriculture Outlook, Montgomery, AL, December 4, 2018
10. "Proper Brooding", Keystone Inc – Small Group Training, Auburn Univ., September 11, 2018
11. "Generators and Back-ups", Keystone Inc – Small Group Training, Auburn Univ., September 11, 2018
12. "Back-up Power Concerns", Tyson Blountsville Complex, Broiler service tech. training, Snead, AL, May 12, 2017
13. "Basics of Poultry House Ventilation", "House Tightness – Circulation Fans", "Basics of Poultry Integration", NRCS training meetings, three held statewide, October 2016
14. "Debunking Poultry Myths", Blount County Home and Garden Show, Oneonta, AL, March 2016
15. "Generator Maintenance", Alabama Poultry and Egg Assoc. (APEA) Southeast AL group, Union Springs, AL, November 2016
16. "S.P.O.T.-On Wintertime Ventilation", Cullman Area Conservation District, NRCS Poultry meeting, Cullman, AL, August 2016
17. "Generators/Back-ups", APEA/NPTC Service Tech Training, Auburn Univ. Feed mill, May 2016
18. "Winter ventilation", Pilgrim's – Service tech winter ventilation meeting, Moulton, AL, October 2015
19. "Economics of High Wind Speed", NPTC - Summer Board Meeting, Auburn Univ., August 2014
20. "NRCS – APHEEP Audit Update", NPTC - Summer Board Meeting, Auburn Univ., August 2014
21. "Attic Inspections / Insulation", NRCS Energy Audit Training Sessions, Cullman, AL, June 2013
22. "Radiant Heating Appliances", NRCS Energy Audit Training Sessions, Crossville, AL, June 2013
23. "Spray Foam Insulation / Sidewall Curtains and Scrape Board Installation", NRCS Energy Audit Training Sessions, Crossville, AL, June 2013
24. "Attic Inspections / Insulation", NRCS Energy Audit Training Session -Troy, AL, July 2013
25. "Radiant Heating Appliances", NRCS Energy Audit Training Session - Troy, AL, July 2013
26. "Spray Foam Insulation / Sidewall Curtains and Scrape Board Installation", NRCS Energy Audit Training Session, Troy, AL, July 2013
27. "Energy Audit Report Evaluation / Q & A", NRCS Energy Audit Training Webinar, Auburn, AL, July 2013
28. "Attic Ventilation Issues", NPTC - Summer Board Meeting, Auburn Univ., August 2013
29. "Beetle Control", NPTC - Summer Board Meeting, Auburn Univ., August 2013
30. "Sidewall Repair Update", NPTC - Summer Board Meeting, Auburn Univ., August 2013
31. "Spray Foam Update", NPTC - Summer Board Meeting, Auburn Univ., August 2013
32. "Sidewall Insulation – Heat Flux Study Overview", NPTC - Summer Board Meeting Presentations: – Auburn Univ., August 2013
33. "Basic Insulation Overview.", Southeast Regional Poultry and Egg Association - On-farm Grower Seminar, September 2013
34. "Generator Service/maintenance", Peco Foods. Inc. Growers, Gordo, AL, October 2012
35. "Generator Service/maintenance", Equity Foods Service Techs & Growers, Clayton, AL, August 2012
36. "Poultry House Energy Auditing", NRCS Technical Staff, Auburn, AL, June 2012
37. "Generator Maintenance", Wayne Farms, Field Service Tech Meeting, Guntersville, AL, July 2012
38. "Generator Maintenance", Koch Foods, Field Service Tech training, Boaz, AL, October 2012
39. "Generator Maintenance", Ingraham Farms, Service Tech Training, Cullman, AL, August 2012
40. "Generator Maintenance", Pilgrim's Service Tech Training, Boaz, AL, September 2012

41. “Generator Maintenance”, Marshall Durbin Inc., Service Tech Training, Haleyville, AL, September 2012

### **2.1.2 ACES Presentations, Regional Audience:**

1. “Generator Maintenance – Breeders”, NPTC Hot Weather Seminar, Auburn Univ., April 23, 2019
2. “Generator Maintenance - Broilers”, NPTC Hot Weather Seminar, Auburn Univ., April 25, 2019
3. “Generator Maintenance”, Peco Foods. Inc. – Tech Training, Auburn Univ., December 19, 2019
4. “Cold Weather Ventilation”, Peco Foods. Inc. – Tech Training, Auburn Univ., December 19, 2019
5. “Insulation Techniques”, NPTC Cold Weather Seminar, Auburn Univ., October 16, 2018
6. “Proper brooding”, Peco Foods. Inc. Grower seminar, October 24, 2018
7. “Generators and Back-ups”, Peco Foods. Inc. Grower seminar, October 24, 2018
8. “Tightness issues in Broiler houses”, NPTC Ventilation Training School, Auburn Univ., October 24, 2017
9. “Back-up Power Concerns”, NPTC broiler service technician hands-on seminar, Auburn Univ., March 18, 2017
10. “Generators”, NPTC Hands-on Training – Summer Technology, Auburn Univ., April 19, 2017

### **2.1.3 ACES Presentations, Multi-state/National Audience:**

1. “Introduction to the Poultry Industry”, Commercial Poultry Basics Seminar, Auburn Univ., February 2023
2. “Broiler Production”, Commercial Poultry Basics Seminar, Auburn Univ., February 2023
3. “Emerging Solar for Poultry”, Seminar for Peco Foods. Inc., Corporate Mgt. Staff, Cullman, AL, August 26, 2021
4. “Generator Maintenance”, Training seminar – Pilgrims Inc, Auburn Univ., February 04, 2020
5. “Fan Maintenance”, Peco Foods. Inc. – Hot Weather Training, group 1&2, Auburn Univ., May 20, 2020
6. “Controllers”, “Generators and Backups”, NPTC Training Seminar for Pilgrims’ Service Techs, Auburn Univ., April 1, 2019
7. “Controllers”, “Generators and Backups”, NPTC Training Seminar for Pilgrims’ Service Techs, Auburn Univ., February 27, 2019
8. “Controllers and Back-ups”, Pilgrims’ Broiler Manager Training, Auburn Univ., May 8, 2019
9. “Generator Maintenance”, Pilgrims’ Broiler Manager Training, Auburn Univ., May 8, 2019
10. “Generator Failures-Breeders”, NPTC Cold Weather Seminar, Auburn Univ., November 5, 2019
11. “Generator Failures– Broilers”, NPTC Cold Weather Seminar, Auburn Univ., November 7, 2019
12. “Viability of Stand-alone Solar for Commercial Poultry”, Tyson Foods, Cooperate Offices, Springdale, AR, August 8, 2018
13. “Proper Structure in Roof Systems”, NPTC New Housing School, Auburn Univ., November 7, 2018
14. “Site Selection and Preparation”, NPTC New Housing School, Auburn Univ., November 6, 2018
15. “Alarms and Back-ups”, NPTC New Housing School, Auburn Univ., November 7, 2018
16. “Basic building components – Exterior”, NPTC Construction School, Auburn Univ., November 2017
17. “Controllers, Alarms, Back-ups”, NPTC Construction School, Auburn Univ., November 2017
18. “Hands-on framing and structural demonstration”, NPTC Construction School, Auburn Univ., November 2017
19. “Generator Maintenance / Back-up Systems”, NPTC Winter Service Tech School, Auburn Univ., September 20, 2016
20. “Insurance considerations”, NPTC Housing School, Auburn Univ., November 2015
21. “Heating System Design”, NPTC Housing School, Auburn Univ., November 2015

22. “Insulation/Tightness”, NPTC Housing School, Auburn Univ., November 2015
23. “Attic Ventilation Technology Update”, International Poultry Exposition, Atlanta, GA, January 2013
24. “Poultry House Insurance”, NPTC Housing School, Auburn University, October 2013,
25. “House Tightness / Stir Fans”, NPTC Housing School, Auburn University, October 2013
26. “Modern Poultry House Heating Systems”, NPTC Housing School, Auburn University, October 2013
27. “Energy Auditing”, NPTC Housing School, Auburn University, October 2013
28. “Attic Inlet Technology”, NPTC Housing School, Auburn University, October 2013

### **2.1.3 ACES Presentations, International Audience:**

1. “Proper Insulation”, Cobb-Vantress Latin Group, Auburn Univ., September 19, 2018
2. “Generator Maintenance.”, Cobb-Vantress Latin Group, Auburn Univ., September 19, 2018

## **2.2 Invited Presentations**

### **2.2.1 Invited Presentations, In-state Audience:**

1. “Current State of the Poultry Industry in the State”, Alabama Farmers Federation – Farm and Land Expo, Montgomery, AL, August 3, 2024
2. “Commercial Poultry Financial Decision Tool”, Alabama Farmers Federation – Farm and Land Expo, Montgomery, AL, August 3, 2024
3. “Contribution of Agriculture to Alabama Economy – Ag. Production Evaluation”, Alabama Agribusiness Council, Orange Beach, AL, June 18, 2024
4. “Farming for Profit, and Agritourism”, Military Veteran and Beginning Farmer Program – Cullman County, Cullman, AL, August 8, 2023
5. “Alabama Ag Outlook”, Alabama Agribusiness Council Annual Meeting, Orange Beach, AL, June 2023
6. “Poultry and Beef Industry Outlook”, Alabama Agribusiness Council Annual Meeting, Perdido, FL, June 21, 2022
7. “Commercial Poultry Economics Hot Topics”, Alabama Agribusiness Council Annual Meeting, Orange Beach, AL, June 22, 2021
8. “Economic Considerations - Commercial Poultry and Solar Energy”, Regional Poultry Growers Meeting, Barbour County, AL, August 03, 2021
9. “Stand-Alone-Solar Update”, Alabama Farmers Federation Poultry Commodity Group Meeting, Montgomery, AL, February 05, 2020
10. “Variable Speed Fan Trial Update”, “Fan Housing Repair Update”, Alabama Farmers Federation Poultry Commodity Group Meeting, Montgomery, AL, February 6, 2019
11. “Wintertime Ventilation”, Alabama Poultry and Egg Assoc – Broiler Seminar, Auburn Univ., September 26, 2018
12. “Update on attic insulation test and fan repair techniques”, Alabama Farmers Federation Poultry Commodity Meeting, Montgomery, AL, February 8, 2017
13. “Hot topics in Broiler Housing”, Alabama Poultry & Egg Assoc Broiler Seminar, Guntersville, AL, September 27, 2017
14. “Update on Weeden Sprinkler Test”, AL Farmer’s Federation Commodity Meeting, Montgomery, AL, April 2016
15. “High Wind Speed”, Wayne Farms Inc. – Service Tech Training, Albertville, AL, August 2014
16. “Attic Inlet Update”, Wayne Farms Inc. – Service Tech Training, Albertville, AL, August 2014

17. “Effects of High Wind Speed in Modern Housing”, Pilgrim’s Inc. Broiler Meeting, Guntersville, AL, August 2014
18. “Attic Ventilation 101”, AP & EA Annual Broiler Service-tech Seminar, Guntersville, AL, October 2013
19. “Updating Poultry Electrical Systems”, USPEA Live Production/Health Seminar, Hoover, AL, Sept. 2012
20. “Energy-Efficient Poultry Lighting”, APEA Broiler Managers, Cullman, AL, July 2012

### **2.2.2 Invited Presentations, Regional Audience:**

1. “Economic Evaluation of the Poultry Industry Using Broiler Buddy” (2x), Tennessee Poultry Growers Association, Martin, TN, Cleveland, TN, November 7 & 9, 2024
2. “State of the Poultry Industry”, Southern Extension Economist Committee Outlook, Knoxville, TN, October 8, 2024
3. “Commercial Poultry Financial Decision Tool”, Southern Extension Economist Committee, Pensacola, FL, June 17, 2024
4. “Poultry Economic Evaluation” (2x), University of Georgia – Southern / Northern Poultry Seminars, Tifton, GA, March 27, 2024, Athens, GA, September 25, 2024.
5. “Poultry Industry Outlook”, Southern Agricultural Economics Association, Atlanta, GA, February 6, 2024
6. “Poultry Economic Outlook”, Southern Extension Economist Committee, Knoxville, TN, November 2023
7. “U.S. Poultry Outlook”, Georgia Ag Forecast, Tifton, GA, March 2023
8. “Hot Topics Facing the Commercial Poultry Industry”, Southern Agricultural Economics Association – Organized Symposium, February 2023
9. “Livestock Market Outlook”, Southern Agricultural Economics Association, February 15, 2023
10. “Commercial Poultry Industry Outlook”, Southern Agricultural Economics Association, New Orleans, LA, February 15, 2022
11. “Poultry House Insurance Concerns”, “Solar for Poultry”, Mississippi Farm Bureau Annual Grower Meeting, Jackson, MS, March 14, 2022
12. “Poultry Industry Outlook”, Southeastern Extension Economist Committee, Pensacola, FL, June 6, 2022
13. “Factors Affecting Solar System Profitability for Southeastern Broiler Growers”, Southeastern Extension Economist Committee, Pensacola, FL, June 6, 2022
14. “Poultry House Insurance Concerns”, Mississippi Poultry Growers Association annual meeting, Florence, MS, June 13, 2022
15. “Poultry Industry Outlook”, Southeastern Extension Economist Committee, September 19, 2022
16. “Promoting Poultry Profitability (for Growers)”, Tennessee Poultry Growers Association annual meetings, 11/3/22 – Cleveland TN, 11/10/22 – Martin TN
17. “COVID-19 Impact on Commercial Poultry – AASP Impact”, Southern Extension Economics Committee, Pensacola, FL, June 14, 2021
18. “Factors Affecting Solar System Profitability for Southeastern Broiler Growers”, Southern Agricultural Economics Association, New Orleans, LA, February 15, 2022
19. “Commercial Poultry Outlook for 2022” Southeastern Extension Economist Committee, Atlanta, GA, September 21, 2021
20. “Generator Maintenance”, Peco Foods. Inc. – Tech Training, Sebastopol, MS, December 18, 2019
21. “Cold Weather Ventilation”, Peco Foods. Inc. – Tech Training, Sebastopol, MS, December 18, 2019
22. “Generators and Back-up System Priorities”, Tennessee Poultry Assoc. Grower meeting, Cleveland, TN, November 10, 2017
23. “Insurance Concerns for Poultry Housing”, Mississippi Farm Bureau, Jackson, MS, July 2015

24. “Risk Analysis and Poultry House Insurance.”, Louisiana Poultry Grower’s Association Annual Grower’s Meetings, Ruston and Manny, LA, September 2014

### **2.2.3 Invited Presentations, Multi-state/National Audience:**

1. “Tunnel Ventilation of Breeder Houses”, Aviagen - Breeder Technician Training, Albertville, AL, February 19, 2020
2. “Tips for Better Tunnel Ventilation”, Midwest Poultry Assoc., Minneapolis, MN, March 14, 2019
3. “New Housing Construction Techniques”, Pilgrims Inc, Sauk Rapids, MN, September 4, 2018
4. “Poultry House Insurance Concerns”, Arkansas Farm Bureau, Little Rock, AR, February 22, 2017
5. “Solid Walled Breeder Houses”, US Poultry and Egg Assoc. Breeder and Hatchery Symposium, Nashville, TN, June 11, 2017
6. “Insulation and tightness in broiler houses”, Peco Foods. Inc. Broiler technicians, Pocahontas, AR, October 3, 2017
7. “Basic Wintertime Ventilation Priorities”, Perdue, Delmarva DE, Field consultations, December 2017
8. “LED Lighting in Breeder and Pullet Housing”, Virginia Poultry Health Seminar, Blacksburg, VA, August 2016
9. “LED Lighting in Broilers”, U. of Virginia Extension System, Charlottesville, VA, November 2016
10. “Generator Maintenance”, U. of Virginia Extension System, Charlottesville, VA, November 2016
11. “Generator Maintenance, Back-ups”, Delaware Poultry Industry, Grower seminar, Harrington, DE, March 2015
12. “Tunnel Fan Maintenance”, UGA Summer Ventilation School, Athens, GA, May 2015
13. “Alarm/Back-up Systems”, UGA Summer Ventilation School, Athens, GA, May 2015
14. “Tunnel Ventilation Basics/High wind speed concerns”, Virginia Poultry Health Management Seminar, Blacksburg, VA, July 2015
15. “Alarm Systems, Back-ups, Generators.”, University of Georgia – Poultry Summer Ventilation School, Athens, GA, April 2014
16. “High Wind Speed, LED’s, Alarm Systems.”, U.S. Poultry and Egg Assoc. Annual Meeting, Nashville, TN, September 2014
17. “Retrofitting Poultry Houses for Energy Efficiency”, University of Georgia - Poultry Winter Ventilation School, Athens, GA, November 2014 “Building Energy Efficient Poultry Houses.”, University of Georgia - Poultry Ventilation School Athens, GA, November 2013
18. “Poultry House Retrofitting”, University of Georgia, Wintertime Ventilation Seminar, Athens, GA, November 2012

### **2.2.4 Invited Presentations, International Audience:**

1. “Introduction to the U.S. Commercial Poultry Industry”, Cayman Department of Agriculture Grower Education Seminar, Grand Cayman Island, June 4, 2024
2. “The Business of Starting a Poultry Business”, Cayman Department of Agriculture Grower Education Seminar, Grand Cayman Island, June 5, 2024
3. “The Business of Starting a Small Ruminant Business”, Cayman Department of Agriculture Grower Education Seminar, Grand Cayman Island, June 6, 2024
4. “Stand-Alone-Solar”, Aviagen International Managers Meeting, Huntsville, AL, December 4, 2019

## **2.3 Extension Multi-media Efforts (100% contribution unless noted otherwise)**

### 2.3.1 Online Webinars – In-state/National Audiences:

1. “The Business of Starting a Small Ruminant Business”, [ACES - AAMU Small Ruminant Series](#), October 27, 2023
2. “Economics of the Commercial Poultry Industry”, [ACES Poultry PPT – Commercial Poultry Basics In-service Training](#), November 01, 2022
3. “Summertime Issues in Broilers”, [Lincoln Premium Poultry – Summer Broiler Training Webinar](#), NE, April 5, 2022
4. “Commercial Poultry”, [2021 FAM Team Ag Market Outlook](#), February 17, 2021
5. “Emerging Solar for Poultry”, [Online Seminar for Peco Foods. Inc.](#), Arkansas, Mississippi, and Alabama Field Staff, October 7, 2021
6. “Solar on Poultry Farms”, [Mississippi Farm Bureau poultry committee webinar](#), March 23, 2022
7. “Solar Applications for Commercial Poultry”, Arkansas Department of Agriculture– Online, August 16, 2021
8. “Wintertime Money Saving Opportunities”, [Commercial Poultry Business Mgt Online Webinar — Exclusive Webinar for Lincoln Premium Poultry Growers](#), NE, November 2, 2021
9. “Generator Operation/Maintenance”, [Peco Foods. Inc. – Field training Webinar](#), May 13, 2020
10. “Fan Maintenance”, [NPTC Webinar](#), May 14, 2020
11. “Commercial Poultry Outlook”, [2021 Farm & Agribusiness AG Outlook Webinar](#), December 8, 2020
12. “Generator maintenance”, [Peco Foods. Inc. – Field Training Webinar II](#), May 15, 2020
13. “Energy Auditing Poultry Houses”, [NRCS Webinar](#), November 2014

### 2.3.2 Online Videos, 2011-Present:

1. “[Evaluating Poultry Houses After the Storm](#)”, [ACES.edu](#), June 30, 2023. **Dennis Brothers (75%)**, M. Conner
2. “[Evaluating Your Backup Power System](#)”, [ACES.edu](#), June 30, 2023. **Dennis Brothers (75%)**, M. Conner
3. “[Commercial Poultry Business Management](#)”, [University of Tennessee Extension – Master Grower Program](#), Aug. 2022, [ACES.edu](#), 2023. **Dennis Brothers**
4. “[Solar Energy for Commercial Poultry](#)”, [University of Tennessee Extension – Master Grower Program](#), Aug. 2022, [ACES.edu](#), 2023. **Dennis Brothers**
5. “[Commercial Poultry Risk Management - Back-up Power](#)”, [University of Tennessee Extension – Master Grower Program](#), Aug. 2022, [ACES.edu](#), 2023. **Dennis Brothers**
6. “Self-Check-up on Generators”, [ACES.edu](#), July, 2020. **Dennis Brothers** (no longer publicly available, contact author for viewing)
7. “[Commercial Poultry Housing Backup Systems](#)” [poultryhouse.com](#), [WayneFarms.com](#), Sept. 12, 2016. **Dennis Brothers (80%)**, S. Bradley
8. “[Improved Poultry House Structures – Steel Knee Braces](#)”, [YouTube](#), 2015. **Dennis Brothers (80%)**, S. Bradley
9. “[Improving Poultry House Construction](#)”, [ACES.edu](#), August 2014. **Dennis Brothers (100%)**
10. “[NPTC Tunnel Wind Speed Tips](#)”, [YouTube](#), 2013. **Dennis Brothers (75%)**, J. Campbell
11. “[NPTC Poultry House Lighting Tips – Energy Efficient Bulb Dimming](#)”, [YouTube](#), 2013. **Dennis Brothers (65%)**, J. Campbell
12. “[NPTC Poultry Farm Generator Service Tips](#)”, [YouTube](#), 2012. **Dennis Brothers (100%)**

2.3.4 Other Multi-media / Social Media / Interviews: \*denotes not available online, \*\*denotes time sensitive article no longer in publication.

1. “Avian Influenza Update”. Interview: [ABC 33/40 Evening News](#), December 17, 2024
2. “2023 Poultry and Egg Outlook”, Interview: [Georgia Farm Journal TV](#), March 2023\*
3. “[Eggflation isn't over yet: Why experts say egg prices will be going up](#)”, Interview: [USA Today online](#), December 14, 2023
4. “[Chicken Wing Prices Dropping](#)”, Interview: [AL.com](#), February 6, 2023
5. “[Chicken Wing Prices](#)”, Interview: [WBRC 6 Evening News](#), March 2023
6. “[Solar Profitability for Southeastern Broiler Growers](#)” JASFMRA Article Expose by “[The Scoop – Solutions for the Farmer’s Advisor](#)”, pg. 32, Aug/Sept 2022.
7. “[Can geothermal fix poultry’s energy crisis?](#)”, Interview: Elizabeth Doughman, [WATT AGnet Research Article](#), [WATTPoultry.com](#), September 14, 2022
8. “Alabama Extension Farm and Agribusiness Management” Facebook page, seven posts, 2,333 people reached, 2022. **Dennis Brothers (100%) \***
9. “Superbowl Party Food Prices – 2021 Edition”, [Farm and Agribusiness Management](#), Facebook Series, Feb. 4, 2021. **Dennis Brothers (100%) \***
10. “Poultry Producers Find Relief Through CARES Act Funds”, [ACES.edu](#), April 5, 2021. K. Nichols Interview piece with **Dennis Brothers (50%)**, A. Rabinowitz \*\*
11. “[Solar Powered Chicken Houses](#)”, [Good Life Magazine](#), May/June/July 2021. Interview subject piece
12. “Solar Farms – What are They?”, [Are You Smarter Than a Farmer](#) – FAM Facebook Series, June 23, 2021. J. Kelton, **Dennis Brothers (50%) \***
13. “[Using Solar Technology](#)”, [Alabama Crops Podcast](#) – Episode 31, November 12, 2021. **Dennis Brothers (50%)**
14. “[Solar-Powered Poultry Farm](#)”, [Simply Southern – RFD TV – Show 521C](#), 2020. **Dennis Brothers, et. al.**

#### 2.4 Guest Lectures (13 total lectures taught)

1. “Commercial Poultry Industry”, Agriculture Prices, AEC 5030 (1). 2024
2. “Introduction to Commercial Poultry Industry”, Global Issues in Agriculture, AEC 1000 (5). 2024, 2023, 2022 - 2x, 2021
3. “Solar in Agriculture”, Bioenergy and the Environment, CSES 5400 (1). 2023
4. “Integrated Poultry Industry Issues”, Agricultural Law, AEC 4040 (3). 2024, 2023, 2022
5. “Poultry Controllers”, Biosystems Management, BSEN 5450 (3). 2019, 2018, 2017

#### 3. Publications: 2011 – Present (100% contribution unless noted otherwise,)

\*denotes articles not available online, \*\*denotes time sensitive articles no longer in publication.

#### 3.1 Refereed Journal Articles

1. [Specialty Crop Agrivoltaics in the Southeastern USA: Profitability and the Role of Rural Energy for America Program, Choices](#), (Accepted 2024-0329). Bijesh Mishra, Ruiqing Miao, Ngbede Musa\*, **Dennis Brothers (10%)**, Madhu Khanna, Adam N. Rabinowitz, Paul Mwebaze, and James McCall
2. [U.S. Broiler Growers Face Increasing Challenges on the Family Farm](#)”, [Choices Magazine](#), 4<sup>th</sup> Quarter, 2023. **Dennis Brothers (60%)**, Paul Goeringer, and Jada M. Thompson

3. "[Factors Affecting Solar System Profitability for Southeastern Broiler Growers](#)", *Journal of the American Society of Farm Managers and Rural Appraisers*, May 2022. **Dennis Brothers (70%)**; Duke, Joshua M.; Rabinowitz, Adam; Garcia, Jose G

### 3.2 Alabama Cooperative Extension System Peer Reviewed Articles

1. "[Broiler Buddy Financial Tool Tutorial—Existing Farms](#)", ACES.edu, December 16, 2024. **Dennis Brothers (75%)**, Adam Kantrovich
2. "[Broiler Buddy Financial Tool Tutorial—New Farms](#)", ACES.edu, December 16, 2024. **Dennis Brothers (75%)**, Adam Kantrovich
3. "[So You Want To Be a Farmer](#)", ACES.edu, ANR-3021, November 2023. **Dennis Brothers**
4. "[New Farmers Guide to the Commercial Broiler Industry – Business and Financing](#)", ACES.edu, ANR-2942, October 20, 2022. **Dennis Brothers**
5. "[New Farmers Guide to the Commercial Broiler Industry – Building a New Farm](#)", ACES.edu, ANR-2941, October 20, 2022. **Dennis Brothers**
6. "[New Farmers Guide to the Commercial Broiler Industry – Purchasing an Existing Farm](#)", ACES.edu, ANR-2940, October 20, 2022. **Dennis Brothers**
7. "[New Farmers Guide to the Commercial Broiler Industry – Poultry Husbandry & Biosecurity Basics](#)", ACES.edu, ANR-2939, October 20, 2022. **Dennis Brothers**
8. "[New Farmers Guide to the Commercial Broiler Industry – Farm Types & Estimated Returns](#)", ACES.edu, ANR-2932, October 20, 2022. **Dennis Brothers**
9. "[Mortality Disposal Methods for Commercial Poultry Growers](#)", ACES.edu, ANR-2921, September 6, 2022. **Dennis Brothers (75%)**; Stanford, M. Kent.
10. "[How Lumber Affects the Chicken Sandwich](#)", ACES.edu, April 2021, *Poultry Times*, Dec. 12, 2020, *Co-operative Farming News*, Oct. 2020, *Alabama Poultry and Egg Assoc Magazine*, Jan/Feb 2021. **Dennis Brothers (60%)**, Maggard, Adam
11. "[Going Solar on the Farm: Basic Components and System Coordination](#)", ACES.edu – ANR-2816, September 29, 2021. **Dennis Brothers**
12. "[Going Solar on the Farm: Implementing Solar Power in Agriculture](#)", ACES.edu – ANR-2789, June 30, 2021. **Dennis Brothers**

### 3.3 Other Peer Reviewed Articles

1. "[Egg Prices Are On The Rise....Again](#)", *Southern Ag Today*, November 5, 2024
2. "[Contract Broiler Growers Could See Changes in Their Pay Arrangements](#)", *Southern Ag Today*, September 23, 2024. **Dennis Brothers**
3. "[Humanely Processed Chicken May Bring a Premium Price](#)", *Southern Ag Today*, June 4, 2024. **Dennis Brothers**
4. "[New Poultry Contracting Regulation’s Potential Effects on Broiler Growers](#)", *Southern Ag Today*, May 8, 2024. **Dennis Brothers**
5. "[Incentives Help Solar Battle Electricity Cost Increases on Commercial Poultry Farms](#)", *Southern Ag Today*, March 26, 2024. **Dennis Brothers**
6. "[Holiday Baking Gets a Boost](#)", *Southern Ag Today*, December 12, 2023. **Dennis Brothers**
7. "[2022-23 Commercial Poultry Outlook](#)", 2023 Georgia Ag Forecast Series AP130-1-01, 2023. **Dennis Brothers**
8. "[Comparing Liquified Propane to Natural Gas for Heating Fuel Cost Management in Poultry](#)", *Southern Ag Today*, November 29, 2023. **Dennis Brothers**
9. "[New Commercial Poultry Breeder Housing Under Economic Stress](#)", *Southern Ag Today*, October, 2023. **Dennis Brothers**

10. "[The Cost of Money and Commercial Poultry Growing](#)", Southern Ag Today, August 2, 2023. **Dennis Brothers (80%)**, Adam Rabinowitz
11. "[Heating Fuel and Electricity Concerns for Commercial Poultry](#)", Southern Ag Today, March 2023. **Dennis Brothers**
12. "[Fuel Price Volatility a Growing Concern for Commercial Poultry Growers](#)", Southern Ag Today 2(35.2). August 23, 2022. **Dennis Brothers**
13. "[Net Farm Income Varies Widely in Commercial Broiler Production](#)", Southern Ag Today 2(28.2). July 5, 2022. **Dennis Brothers (60%)**; Paul Georing
14. "[Can Solar Panels Improve Contract Poultry Farm Profitability?](#)", Southern Ag Today 2(27.3). June 29, 2022. **Dennis Brothers**
15. "[The Cost of Avian Influenza to the Southeastern Broiler Industry](#)", Southern Ag Today 2(14.2). March 29, 2022. **Dennis Brothers**
16. "[Poultry's Perfect Storm in 2021-22](#)", Southern Ag Today 2(4.2), January 18, 2022. **Dennis Brothers**
17. "[Commercial Poultry Input Costs Heating Up!](#)", Southern AG Today, October 19, 2021. **Dennis Brothers**

### 3.4 Non-Peer Reviewed Publications: ACES Newsletters/Information Pieces, Timely Topic Articles, and Popular Press Articles

#### 4.4.1 ACES Newsletters/Information Pieces

1. "[Solar Incentives Can Help Battle Electricity Cost Increases on Commercial Poultry Farms](#)", ACES.edu, April 30, 2024. **Dennis Brothers**
2. "[Comparing Liquefied Propane to Natural Gas for Heating Fuel Cost Management in Poultry](#)", ACES.edu, November 2023. **Dennis Brothers**
3. "[Commercial Poultry Mortality Management Economics](#)", ACES.edu, May 22, 2022; Alabama Poultry and Egg Magazine, Sept/Oct 2022. **Dennis Brothers (75%)**; Stanford, M. Kent
4. "Solar Energy System and Net Metering Breakdown for Commercial Poultry in Arkansas", Whitepaper for Arkansas Poultry Federation and Tyson Foods. February 2022. **Dennis Brothers \***
5. "[The Feasibility, Marketing, and Economic Impact of New Beef Cattle Processing in Alabama](#)", Alabama Cattlemen's Association whitepaper, December 20, 2021. Rabinowitz, A., Sawadgo, W. **Dennis Brothers (20%)**, Kelly, K., Runge, M.
6. "[Combating Heating Fuel Concerns for Poultry Growers](#)", Tennessee Poultry Association Newsletter, Winter 2021 edition; ACES.edu, Oct. 25, 2021. **Dennis Brothers**
7. "[Stop the Economic Drain of Catastrophic Losses in the Poultry Industry](#)", ACES.edu, Oct 9, 2020. **Dennis Brothers**
8. "Seven Basics of Better Brooding", Poultry Engineering, Economics & Management Newsletter Series #80- January 2014. Campbell, J., **Dennis Brothers (50%)**, et. al.
9. "Attic Inlet Ventilation: Lessons Learned", Poultry Engineering, Economics & Management Newsletter Series #88, 2014. **Dennis Brothers (50%)**, et. al.
10. "Update: LED's for Broiler House Lighting", Poultry Engineering, Economics & Management Newsletter Series #81, Poultry Times, June 9, 2014, March 2014. Simpson, E., **Dennis Brothers (25%)**, et. al.
11. "Tensioner Failure – Serious Problem, Easy Fix", Poultry Engineering, Economics & Management Newsletter Series #83, June 2014; Alabama Poultry and Egg Magazine, May/June 2014, May/June 2017; Poultry Times, August 18, 2014 & June 8, 2015. **Dennis Brothers**
12. "A Practical Guide to On-Farm Fan Testing", Poultry Engineering, Economics & Management Newsletter Series #82, May 2014; Alabama Poultry and Egg Magazine, May/June 2014, Mar/Apr 2017; Poultry Times, June 9, 2014. **Dennis Brothers**

13. “High Windspeed for Large Birds – Practical Considerations”, Poultry Engineering, Economics & Management Newsletter Series #84, July 2014, Alabama Poultry and Egg Magazine, July/August 2014, Poultry Times, August 18, 2014. **Dennis Brothers**
14. “Repairing Corroded Sidewall Metal”, Poultry Engineering, Economics & Management Newsletter Series #85, October 2014, Alabama Poultry and Egg Magazine, September/October 2014. **Dennis Brothers**
15. “Is Poor Drinker Management Costing You Fuel Dollars?”, Poultry Engineering, Economics, and Management Newsletter, Number 78, January 2013, Poultry Times, Aug. 15, 2017, Dec. 24, 2018. **Dennis Brothers (90%)**, J.C. Campbell, J.O. Donald, E.H. Simpson
16. “Choosing Sidewall Insulation”, Poultry Engineering, Economics, and Management Newsletter, Number 75, January 2012. Campbell, J.C., **Dennis Brothers (25%)**, J.O. Donald, E.H. Simpson
17. “Choosing Sidewall Insulation”, Alabama Poultry Magazine, Vol. 8, No. 1, January/February 2012. Simpson, E.H., Donald, J.O., Campbell, J.C., **Dennis Brothers (20%)**
18. “Get Ready for Hot Weather Now”, Poultry Engineering, Economics, and Management Newsletter, Number 76, March 2012; Alabama Poultry Magazine, March/April 2012 – Vol. 8 No. 2, p. 25-29. Donald, J.O., J.C. Campbell, **Dennis Brothers (25%)**, E.H. Simpson
19. “Converting to Natural Gas: A Practical Guide”, Poultry Engineering, Economics, and Management Newsletter, Number 77, August 2012; Poultry Times, October 8, 2012. **Dennis Brothers (90%)**, J.C. Campbell, E.H. Simpson, and J.O. Donald
20. “Getting a Handle on Managing Attic Inlet Systems (technical monograph)”, National Poultry Technology Center, Auburn, University, Nov. 2012. Donald, James O., **Dennis Brothers (50%)**, J.C. Campbell and E.H. Simpson

#### 3.4.2 ACES Timely Topic Articles

1. “[Don’t Be Chicken: Consumers Find Chicken Wings in Plenty for Super Bowl LVII](#)”, ACES.edu, February 5, 2024. **Dennis Brothers (75%)**, C. Sikes
2. “[Is the Egg Market About to Crack?](#)”, ACES.edu, March 8, 2023. **Dennis Brothers**
3. “The Truth Behind Eggcessively Expensive Eggs”, ACES.edu, March 27, 2023. **Dennis Brothers (75%)**, C. Sikes \*\*
4. “Double-Down on Chicken Wings for March Madness”, ACES.edu, February 28, 2022. **Dennis Brothers \*\***
5. “[Poultry Biosecurity Measures Imperative During Current Avian Influenza Outbreaks](#)”, ACES.edu, March 22, 2022. **Dennis Brothers (50%)**; Macklin, Ken
6. “Current Hot Topics for Poultry and Beef Producers”, ACES.edu, June 29, 2022. **Dennis Brothers \*\***
7. “[Fuel Price Volatility a Growing Concern for Commercial Poultry Growers](#)”, ACES.edu, August 26, 2022. **Dennis Brothers**
8. “Turkey Prices Rising, Buy Your Turkey Early”, ACES.edu, November 2, 2022. **Dennis Brothers \*\***
9. “Contract Poultry Growers – Amendment to CFAP II”, ACES.edu, August 30, 2021. **Dennis Brothers (50%)**, Rabinowitz, A. \*\*
10. “Contract Poultry Growers Now Eligible for CFAP Funds”, ACES.edu, Jan. 26, 2021. **Dennis Brothers (50%)**, Rabinowitz, A. \*\*
11. “New State Program Supports Poultry Growers Impacted by Pandemic”, ACES.edu, Oct 1, 2020. **Dennis Brothers \*\***

### 3.4.3 Popular Press Articles

1. “Does Applying Poultry Litter to Cool Season Grazing Make Dollars and Sense”, Alabama Cooperative Farming News, Summer 2024 Edition. **Dennis Brothers (80%)**, Rishi Prasad \*Online subscription only
2. “[Is Poultry Litter a Good Idea for Fall Grazing?](#)”, Alabama Cattleman, August 1, 2023. **Dennis Brothers (60%)**, Rishi Prasad
3. “New Farmer’s Guide”, Alabama Poultry and Egg Magazine, Nov/Dec 2023. **Dennis Brothers \***
4. “[Combating Heating Fuel Concerns for Poultry Growers](#)”, Alabama Poultry and Egg Magazine, pg. 7, Jan/Feb 2022. **Dennis Brothers**
5. “Going Solar on the Farm – Is Direct Usage Solar Right for Your Application?”, Alabama Farmer’s Cooperative Magazine, June 2021. **Dennis Brothers \***
6. “Grower Tips: Cold Weather Prep.”, Poultry Times, Oct. 12, 2020. **Dennis Brothers (50%)**, et.al.\*
7. “[Grants Help Poultry Producers Recover from COVID Losses](#)”, Alabama Poultry and Egg Assoc Magazine, Nov/Dec 2020, pg. 11. **Dennis Brothers (50%)**, Rabinowitz, A.
8. “Picture’s Worth 1000 Words: Rusting Fan Repair Using Sprayed-on Poly-urea”, Alabama Poultry and Egg Assoc Magazine, Mar/Apr 2019. **Dennis Brothers (95%)**, et. al. \*
9. “[Stand-Alone-Solar for Poultry – Harnessing Renewable Energy for Commercial Broiler Production](#)”, Alabama Poultry and Egg Assoc Magazine, May/June 2019, pg. 28. **Dennis Brothers (95%)**, et. al.
10. “[4 keys to cooling broilers using tunnel ventilation](#)”, WATT Poultry USA, June 2019. **Dennis Brothers (75%)**, Alonzo
11. “Solar-powered standalone poultry houses”, Poultry Times, Aug. 19, 2019. **Dennis Brothers \***
12. “Going Off the Grid”, Neighbors Magazine, August 2019. **Dennis Brothers \***
13. “Stand-Alone-Solar for Poultry, Harnessing Renewable Energy for Commercial Broiler Production”, Cooperative Farming News, August 2019. **Dennis Brothers \***
14. “Grower Tips: Evaporative cooling versus dry floors.”, Poultry Times, June 11, 2018. Campbell, J., Davis, J., **Dennis Brothers (25%)**, et. al.\*
15. “Grower Tips: Choosing poultry house external roof, siding metal sheathing.”, Poultry Times, August 20, 2018. **Dennis Brothers (90%)**, Davis, J., et. al.\*
16. “Testing Blown-in Fiberglass Insulation in New Construction: One Year Observations”, Alabama Poultry and Egg Assoc Magazine, Sept/Oct 2018. **Dennis Brothers \***
17. “Growing Broilers Using Solar Energy – A Novel Concept or a Coming Practice?”, Alabama Poultry and Egg Assoc Magazine, Nov/Dec 2018. **Dennis Brothers (90%)**, et. al. \*
18. “Preparation Key to Poultry Producers Managing Severe Weather”, Neighbors Magazine, December 2018. **Dennis Brothers (90%)**, Miller Justin \*
19. “Picture worth 1000 words - Light Intrusion”, Alabama Poultry and Egg Assoc Magazine, Nov/Dec 2017. **Dennis Brothers (75%)**, et. al.\*
20. “Grower Tips: Maintaining full feed lines with smaller birds”, Poultry Times, March 15, 2016. **Dennis Brothers\***
21. “Proper Preparation for Spray Foam Application in a Poultry House Retrofit”, Alabama Poultry and Egg Magazine, March/April 2015. **Dennis Brothers\***
22. “Proper Preparation Prevents Poor Performance in Curtain Sided House Spray Foam Upgrades”, Alabama Poultry and Egg Assoc Magazine, May/June 2016. **Dennis Brothers \***
23. “Exploration of Solar Power for the Modern Poultry Farm”, Poultry Times, August 15, 2016. **Dennis Brothers \***

24. “Grower Tips: Maintaining full feed lines, better brood curtain management”, Alabama Poultry and Egg Assoc Magazine, Sept./Oct. 2016. **Dennis Brothers\***
25. “Attic Inlet Technology Update -2014”, Alabama Poultry and Egg Magazine – January/February 2014. **Dennis Brothers (35%)**, J.C. Campbell, J.O. Donald, E.H. Simpson\*
26. “Recommendations for New Poultry Farm Planning and Documentation”, Alabama Poultry and Egg Magazine, March/April 2014. **Dennis Brothers (90%)**, et. al.
27. “Tips to Achieve Top Evaporative Cooling”, Poultry Times, March 28, 2012, p. 7. Simpson, E.H., Donald, J.O., Campbell, J.C., **Dennis Brothers (20%)**
28. “Converting from Propane to Natural Gas: Be Informed”, Alabama Poultry Magazine, May/June 2012 – Vol. 7 No. 3, p. 26-29. **Dennis Brothers (75%)**, Simpson, E.H., Donald, J.O., Campbell, J.C.
29. “So It’s Not Rocket Science, But It Could Save You Some Money”, Alabama Poultry Magazine, July/August 2012 – Vol. 7 No. 4, p. 28-29. Simpson, E.H., Donald, J.O., Campbell, J.C., **Dennis Brothers (20%)**
30. “Tune-Up Checklists for Poultry House Equipment”, Poultry Times, August 27, 2012, p. 5. Simpson, E.H., Donald, J.O., **Dennis Brothers (25%)** and Campbell, J.C.
31. “Do You Know How to Manually Startup and Transfer Generator Power on Your Poultry Farm?”, Alabama Poultry Magazine, Vol. 7, No. 5, September/October 2012. Donald, J.O., **Dennis Brothers (50%)**, J. Campbell and E.H. Simpson
32. “Bare Ceilings = Excessive Heat Loss = Increased Fuel Bills”, Alabama Poultry Magazine, Vol. 7, No. 5, September/October 2012. Campbell, J.C., **Dennis Brothers (20%)**, J.O. Donald, and E.H. Simpson
33. “Technology Update and Trends for Attic Inlets”, Poultry Times, October 8, 2012, p. 2. Simpson, E.H., Donald, J.O., Campbell, J.C., **Dennis Brothers (20%)**, Purswell, J
34. “Will Your Standby Generator Stand Up?”, Alabama Poultry Magazine, Vol. 6, No. 6, November/December 2012. Campbell, J.C., **Dennis Brothers (30%)**, J.O. Donald, and E.H. Simpson

#### 4. Funding Activity, Service

##### 4.1 Extension Program Support Activity:

##### 5.1.1 Extension Industry Partnerships and In-Kind Funding - Industry supplied equipment / products / funds used for demonstrations and testing. **\$228,400**

1. **\$20,000** - SAS demonstration control building, Butts Construction (Grower) 2019
2. **\$45,000** - SAS system back-up generator, Atlantic Power Systems, 2019
3. **\$2,500** - SAS connected Rotem communicator system and wiring, Diversified Products Inc., 2019
4. **\$750** - Windsock circulation fans for on-farm test, Southwest Sales, 2019
5. **\$80,000** – Retro-fit spray foam insulation, poly-urea coatings on 4 houses for trial, Demilec Inc., 2019
6. **\$8,000** – 50% cost-share for novel inlet vent shades installed for on-farm testing, Double L Inc., 2019
7. **\$13,750** - Variable speed fans supplied at discount to grower for on-farm testing, Munters Inc, 2018
8. **\$6,000** - Attic insulation material installed for on-farm comparison demonstration, IDI, 2016
9. **\$2,500** - Weeden Sprinkler System for on-farm test, Weeden Systems, 2015
10. **\$1000** – PVC sidewall panels for sidewall repair testing on-farm, AGSeal, 2015
11. **\$16,000** – New poultry farm sidewall insulation test installments; Smith Poultry Inc. 2014

12. **\$600** - Diatomaceous Earth beetle insecticide for on-farm testing, Ivesco/K-Supply, Inc., 2013
13. **\$24,500** - Attic vents and vent closures installed for on-farm testing, Double L Inc., Munters Inc., 2012-2014
14. **\$2,800** - LED bulbs for testing on-farms, EnergyFicient Inc.2014
15. **\$5,000** – Estimated value of various small item donations like caulking, vents, sensors, etc.

#### 4.1.2 Direct Extension Project Funding \$44,000

1. **\$4,000** – Avian Influenza Bio-security kits for all county extension offices, Alabama Farmers Federation, Alabama Poultry and Egg Association, 2024
2. **\$40,000** - Funding for AU to re-write housing specifications, Lincoln Premium Poultry / Costco, 2018

#### 4.2 Extramural Grant Activity: total - \$377,045, individual - \$309,019 (contribution noted)

1. **\$49,932** - Southern Risk Management Education Center, 2023-2024 – Online development, online education and in-person presentation of the Commercial Poultry Financial Decision Tool; **Brothers (100%)**
2. **\$40,000** - Alabama Agribusiness Council, 2023 – Study of the economic contribution of agriculture to the state’s economy; Rabinowitz, **Brothers (30%)**
3. **\$39,101** - USDA-ARS Sustainable Poultry Processing, 2023-2027 – Economic evaluation of the implementation of Controlled Atmospheric Stunning of broilers; **Brothers (100%)**
4. **\$20,000** - Alabama Cattleman’s Association, 2022 – Feasibility study of small meat processing business development in Alabama; Rabinowitz, Sawadgo, **Brothers (20%)**, Runge, Kelly
5. **\$200,000** – Stand-Alone-Solar - Tyson Foods Inc, 2018 - 2028 – Implementation and evaluation of off-grid solar capabilities in commercial broilers; **Brothers (100%)**
6. **\$19,932** – Port-a-cool, LLC, 2017 – Evaluation of evaporative cooling pad products and cleaning procedures; Davis, Simpson, **Brothers (20%)**
7. **\$8080** – NRCS Energy Auditing, 2013-14 – Travel Grant; **Brothers (100%)**

#### 4.3 Service, Departmental / Other

1. 2024 Governor’s Agriculture Strategic Planning Committee – Poultry Focus Group
2. 2024 to 2026 Southern Agricultural Economics Association’s Outstanding Extension Program Award Committee.
3. 2024 Served on Master of Science Committee for Ngbede Musa – degree successfully earned.
4. 2024, ’23, ’22 Judged the Tennessee Poultry Association Annual Scholarship
5. 2023, ’22, ’21 Judged the Tennessee Poultry Association Poultry Farm Family of the Year
6. 2023 Served on Search Committee for East Central SET Farm and Agribusiness Management Regional Extension Agent – position filled successfully.
7. 2023 Chaired departmental Admin Position search committee – position filled successfully.
8. 2022 Served on two departmental Admin Position search committees, both successful.
9. 2022 Served on Master of Science Committee for Jose Garcia - degree successfully earned.