

AGCO Student Design Competition Winners 2001 - Present

2022

1st Place

Ohio State University: Emma Rand, Katelyn Sang, Lindsey Shimoda, Donald Smith
Transpiration Control for Sustainable Deep Space Food Production

2nd Place

Texas A&M University: Matthew Atkins and Michael Unterman
Vibration Monitoring for Predictive Maintenance

3rd Place

North Carolina State University: Elizabeth Beyer, Camryn Darragh, and Jake Jennings
The Incorporation of a Bird Deterrent System into Floating Bag Mariculture

2021

1st Place

University of Tennessee-Knoxville: Margie Peeler, Jim Roebuck, and Lewis Webber
Gradual Rotary Adjustment for Sloped Surfaces (G.R.A.S.S.)

2nd Place

University of Wisconsin-Madison: Kylie Callahan, Jacob Olivares, and Priyanka Patel
Portable Hemp Decorticator

3rd Place

University of Tennessee-Knoxville: Benjamin Cruz and Colby Gillmann
Solid-State Microwave Control and Data Collection System

2020

1st Place

University of Tennessee-Knoxville: Logan Ashworth
Rapid Autonomous Corn Phenotyping – Data Acquisition System

2nd Place

University of Tennessee-Knoxville: McKensie Nelms and Mary Morris
Poultry Farm Security Gate: Autonomous Vehicle Recognition System

3rd Place

Texas A&M University: Ana Chen Reyes, Jacy Gray, and Madison Hodges
Rural Garden in a Food Desert

2019

1st Place

Texas A&M University: Haley Forbes, Kendra Bailey, Martin Jeffers
Black Soldier Fly Larvae Bio-Waste Treatment and Biomass Conversion System Design in Haiti

2nd Place

North Carolina State University: Lucas Mitchell, Hannah Monroe, Carrie Sanford
Post Harvest Handling of Chopped Biomass Feedstocks through Desiccation for Long-Term Storage

3rd Place

North Carolina State University: Sam Beavans, Ryan Jackson, Ryan Phillips
Position Enabled Section Control Benjamin Foote for Wildflower Planting

2018

1st Place

North Carolina State University: Alex Greeson, Benjamin Cauthen, Benjamin Cranfill, Matthew Parker, William Marsh
Aeromechanical Cleaning of Pine Straw

2nd Place

University of Wisconsin – Madison: James Dodge, Yash Mirchandani, Javier Castro Zachary Wilson, Jason Ha
Prestressed Concrete Post Fabrication System

3rd Place

Oklahoma State University: Laymon Barnett, Caleb Curren, Bo Davenport
Strongarm Systems: Windrower Three-Point Implement Mounting Attachment

2017

1st Place

University of Wisconsin-Madison: Jared Francois, Melissa Gustafson, Grant Herrman, Josiah Zanghi
Hazelnut Shell Fragment and Kernel Separator Exploiting Differences in Particle Rolling Ability

2nd Place

North Carolina State University: Emily DeHority and James Abdalla
Improvements on a Direct Chemical Injection System

3rd Place

University of Tennessee-Knoxville: Madison Brummitt, David Gilliam, Garrett Froula
The EZ-Lift: A Mechanical Lift-Assist for Rollover Protective Structures

2016

1st Place

University of Tennessee: Hayden Jordan, Taylor Overton, Jonathan Yoder
Integrated System to Monitor Dairy Calf Feeding Behavior for Pre-Clinical Detection of Disease

2nd Place

University of Wisconsin - Madison: Caynen Klessig, Kathleen Roush, Rebecca Smith, Haohua (Mandy) Wang

Separation Device of Hazelnut Kernels and Shells

3rd Place

Kansas State University: Austin Schmitz, Peter Masters, Davie Leiszler Mechanical

Net Wrap Remover for Large Round Hay Bales

2015

1st Place

University of Wisconsin – Madison: Jennifer Sanford, Travis Schumacher, Jenelle Selig, Lindsay Shewchuk, Trever Meyer

Small-Scale Hazelnut Cracker

2nd Place

Ohio University – Athens: Devon Baum, David D’Agostino, Corey Deeter, Eric Tolar, Ryan Radecki

Bean Bagging System

3rd Place

University of Tennessee: Chance Frana, Cole Stonebrook, Sam Tabor

The Squeaver

2014

1st Place

University of Wisconsin – Lucas Sisler, Shengzhhi He, Ned Ahlberg Batch

– Type Barrel Washer for Root Crops

2nd Place

University of Wisconsin – Joseph Treinen, Nolan Lacy

A Scale Attachment for a Tractor Front End Loader

3rd Place

Iowa State University – Andrew Verhasselt

Automated Wire Feeder Add-on to Mechanical Transplanter’s Model 95 Tunnel Layer

2013

1st Place

University of Wisconsin – Brandon Nigon, Scott Dietsche, Christopher Strehmel BADGER

DYNO: An Easily Adopted Tractor Hitch Dynamometer

2nd Place

University of Tennessee – Dillon Avans, Robert Baldus, Andrew Veeneman

A Systematic Approach to the Improvement of High Tunnels with Regards to Their Ability to Withstand Wind

3rd Place

University of Tennessee – Ryan Hodges, Chanci King, Brandon Massengill, Brittani Pere

Subclinical Mastitis Inline Detection System (S.M.I.D.S.)

2012

1st Place

University of Tennessee - Chris Drinnon, Tyler Pannell, Steven Pickett
Where the Rubber Leaves the Road: Designing a Single Turf Tire Test Unit for Traction Performance

2nd Place

Oklahoma State University - Scott Clark, Eric Lam Automated Chemical Injection System - N2 Line Solutions

3rd Place

Kansas State University - Jacob Nagely, Lisa Hillstock Measure Ear Drooping to Detect Cattle Illness

2011

Place	Name(s), School and Project
1st	Fernando Aristizabal - University of Florida <u>Big Cypress Seminole Indian Reservation: Carl Baxley's Seepage Irrigation and Drainage System Design</u>
2nd	James Bevington, Joseph Freeman, Benjamin Hoptroff, Clayton Parsons - University of Tennessee <u>Design of a Blue Crab Nursery System for Stock Enhancement</u>
3rd	Tai-wen (Debby) Chou, Nathan Holeman, Haley Malle, Jeff Welch - University of Arkansas <u>Remote Bidirectional Bump Gate for a Disabled Cattle Farmer</u>

2010

Place	Name(s), School and Project
1st	Heath Duncan, Lori Gibson, Alexander McLemore, Rebecca Messer – University of Tennessee <u>"CROPP – Cryogenic Reduction of Organic Pest Plants"</u>
2nd	Keith Connolly, Tatjana Trebic – McGill University <u>"Optimization of a Backyard Aquaponic Food Production System"</u>
3rd	Joel Jagodinsky, Luke Melchior, Jesse Smith, Andrew Van Hoorn - University of Wisconsin <u>"Small Engine Dynamometer"</u>

2009

Place	Name(s), School and Project
1st	Peter Harris, Pao Her, Andrew Holstein, Kyle Nelson – University of Wisconsin <u>"Knuckle-Boom Crane Attachment for Skid Steer Loaders"</u>

- 2nd Kody Habeck, Shane Williams – University of Wisconsin
"Badger Bale Borer: A Hay, Forage, and Biomass Sampling Device"
- 3rd Mitchell Groothuis, John Kruckeberg, William Nichols, Abdoulaye Samba, Chase Shaver – University of Tennessee
"Powered Foldable ROPS"

2008

- | Place | Name(s), School and Project |
|--------------|---|
| 1st | Thomas Fortin-Chevalier, Pénélope Thériault – McGill University
<u>"Design of a Continuous Flow Biodiesel Production Research Unit in India"</u> |
| 2nd | Erin E. Byers, Kimberly N. Geary, Boone S. Hillenbrand, Andrew O. Smith - University of Tennessee
<u>"Biomass Automated Densification Device – B.A.D.D.!"</u> |
| 3rd | Michael A. Hagan, Steven J. Yaste, Charles A. Masterson, Matthew T. Ballard - University of Kentucky
<u>"Agricultural Implement Guidance System – Dream Engineering"</u> |

2007

- | Place | Name(s), School and Project |
|--------------|---|
| 1st | Clint T. Cosgrove, Matthew L. Lemmons, Kevin D. Taylor, Lance P. Klement - Oklahoma State University
<u>"Redesign of a Tree Shear"</u> |
| 2nd | Grant J. Wonderlich and Andrew M. Goodall - University of Kentucky
<u>"Single Wheel Tester for Small Agricultural, Construction and ATV Tires"</u> |
| 3rd | Eric Krogh and Justin Jackson - University of Kentucky
<u>"Equine Mobile Feeder"</u> |

2006

- | Place | Name(s), School and Project |
|--------------|------------------------------------|
|--------------|------------------------------------|

- 1st Joe M. Biggerstaff, William R. Haar, Matt S. Kilker, Taylor F. Miller - Oklahoma State University
"Design of a Manual Cattle Chute"
- 2nd Aaron R. Flouro, Kyle P. Bunnow - University of Wisconsin
"Moment Resisting Wood-to-Concrete Pier Connection"
- 3rd Garrett L. Anderson, John P. Lyons, Joshua B. Meuth, Joshua L. Mosley - Texas A&M University

2005

- | Place | Name(s), School and Project |
|--------------|--|
| 1st | Brent C. Jessop, Krista L. Sider, Tom Lee, University of Guelph
<u>"Acoustic/EMG System for the Analysis of Food Texture"</u> |
| 2nd | Matthew J. McDonald, University of Wisconsin
<u>"Quick-Attach Grapple System"</u> |
| 3rd | Katherine Q. Christian, Benjamin B. Clark, Ester V. Dittert, Brian D. Luck, University of Kentucky
<u>"Precision Sprayer Control System Design"</u> |

2004

- | Place | Name(s), School and Project |
|--------------|---|
| 1st | Kody R. Featherston, Candice L. Johnson, J. Kent Evatt, and Monica L. Johnston, Oklahoma State University, <u>Effective Means of Silt Fence Installation</u>
Additional files from the OSU team: <u>OSU Silt Fence Installer</u> ; and <u>n Brochure</u> |
| 2nd | Tyler G. Gipson, Elizabeth Kaufman, Brian K. Shcaffer, and Derek A. Schluterman, University of Arkansas, <u>The Design of a System for the Rapid Pasteurization of Animal Carcasses Contaminated with High Risk Pathogens</u> |

2003

Placement Name, School and Project

- 1st Amber D. (Hasche) Widman - Iowa State University. Title of Paper: "Model for Testing Greenhouse Ventilation Logic." Link to paper (pdf; 1,269 kilobytes): [Model for Testing Greenhouse](#).
- 2nd Vincent L. Stout - Iowa State University. Title of Paper: "Swine Methane Emissions Using the Tracer Gas Ratio Method."
- 3rd James A. Koch - South Dakota State University. Title of Paper: "Low Pressure Sprinkler Distribution." Link to paper (pdf, 2,163 kb): [Low Pressure Sprinkler Distribution](#)

2002

Placement Name, School and Project

- 1st Nicholas A. Krueger - Iowa State University
Title of paper: [Gravity Table Separation of Commodity Corn](#).
- 2nd Timothy J. Van Pelt - Iowa State University
Title of paper: [Biomass Densification](#).
- 3rd Nathan E. Isaac - Kansas State University
Title of paper: [Using Cone Index Data to Explain in Field Yield Variation](#)

2001

Placement Name, School and Project

- 1st Laura K. Doud, Daniel P. Grant, David C. Smith
Michigan State University
["Trim EZ Pruner D.D.L. Equipment Solutions"](#) (pdf file).
- 2nd Jamie D. Foote, Samuel J. Ray, John S. Young, III
University of Tennessee
"Environmental Control in Hydroponic Tomato Greenhouses"
- 3rd Ryan E. Nelson, Tyler G. Gipson, Christopher M. Long, Gloria B. Hebert, Clay W. McDaniel, Ray S. Avery, Johnny M.L. Mason, Mark E. Orlicek, University of Arkansas
"Design of an Aeroponic Plant Growth Chamber"