Each of the last three years Harry Stine and Bruce Rastetter have been kind enough to host a December holiday party for Agricultural Entrepreneurship Initiative students, alumni, supporters, panelists, and others involved in the agricultural entrepreneurship community. Each has been a delightful time for fellowship, idea sharing, and making new friends. As I approach my 15th semester at Iowa State University, I can’t help but reflect at the simple power of bringing good people together.

‘Ecosystem’ is used in many ways, but I think it is an appropriate term to use for the community that is being built by those who touch the Agricultural Entrepreneurship Initiative. Each year we ask for help from so many great friends for mentoring, interviews, panelist duty, and other ways of engaging with students. You all are such a big part of developing the entrepreneurial instincts and talents of students, but now that ecosystem is sprouting new vines off-campus in a number of ways.

We have alumni who’ve been out of school for a few years now working on their first startup. We have current students partnering with past students on new businesses. And we continue to have so much help from seasoned business professionals and entrepreneurs in creating new opportunities. I want to extend a huge thank you to the network of great people who support the Agricultural Entrepreneurship Initiative.

In this latest issue of STARTUPS, you’ll find information about Agricultural Entrepreneurship Initiative activities on campus, but also about startup action among students and alumni. You’ll also read about an exciting new agricultural accelerator program we helped launch in the ISU Research Park, the Ag Startup Engine. Each of the stories form a part of the foundation of what we think is a much richer agricultural entrepreneurship ecosystem.

Thanks again to all who have contributed to the Agricultural Entrepreneurship Initiative in the last year.

Kevin Kimle
Rastetter Chair of Agricultural Entrepreneurship
The council, comprised of successful agricultural entrepreneurs from across the Midwest, assists the initiative in evaluating current programs and providing a vision for the future of the program.

**ROGER UNDERWOOD** | Founder of Becker Underwood and Riverwood Holdings | AMES, IA

**MURRAY WISE** | Founder and CEO of Murray Wise & Associates | CHAMPAIGN, IL

**HARRY STINE** | Founder and president of Stine Seed Company | ADEL, IA

**DAVID RETTIG** | Founder and CEO of Rembrandt Foods | SPIRIT LAKE, IA

**TRAY THOMAS** | Founding partner of Context Network Solutions | WEST DES MOINES, IA

**ROXI BECK** | Vice President of CMA, Inc. | JOHNSTON, IA

**SHANNON LATHAM** | VP of Latham Seeds | ALEXANDER, IA

**CRAIG HILL** | President of Iowa Farm Bureau Federation | MILO, IA

**ERIC HOLTKAMP** | Founder of ControlTech | ALTOONA, IA

**RYAN PELLETT** | VP and CEO of J.D. Heiskell & Company | ELKHORN, NE

**DR. WAYNE FREESE** | Founder of Newport Labs and Prairie Holdings Company | WORTHINGTON, MN

**JOE KERNS** | Founder of Kerns & Associates | AMES, IA
2015 marked a special milestone for the Agricultural Entrepreneurship Initiative (AgEI) at Iowa State University. The program celebrated its 10 year anniversary of providing students with practical business development and entrepreneurial experiences essential for their success in future careers and endeavors.

Founded in 2005, the AgEI program was the dream of an Iowa State alum and entrepreneur who saw the importance of exposing students, at a young age, to the opportunities entrepreneurship could provide to them. Roger Underwood, founder of Becker Underwood, and his wife, Connie Underwood, approached Wendy Wintersteen, Dean of Iowa State University’s College of Agriculture and Life Sciences (CALS), with a $1.6 million gift to develop a program dedicated to growing and fostering the entrepreneurial spirit of undergraduate students.

“We wanted to build a world class entrepreneurship program designed to encourage students to think innovatively and take risks that have potential to change the world of agriculture and life sciences for the better,” explained Roger (“80 agricultural business). “Since Iowa State did so much for me as an undergraduate, our dream was to give back to help today’s students create a better tomorrow.”

AgEI programming began with the implementation of an internship program, known as the Summer Entrepreneurial Internship program, which allowed students to work with entrepreneurs from all over the world and in many interest areas. Since its inception, over 15 program offerings have been added, including roundtable discussions with successful entrepreneurs, a student business incubator, and international business development courses. (For a complete overview, visit www.agei.cals.iastate.edu)

“When I first came to Iowa State I was convinced I couldn’t be in involved in the AgEI program because I didn’t have a brilliant business idea,” said Joni Erwin, senior in agricultural business. “I quickly realized that wasn’t the case. The program has challenged me to think with an entrepreneurial mindset and changed the way I approach projects and challenges. It has also given me the opportunity to meet entrepreneurs from all over the world. The AgEI program has truly helped me to become a better professional and I believe I will continue to reap the benefits of this program long after I graduate.”

As AgEI celebrated its 10-year anniversary, success was defined by the eighteen student businesses that have been created through resources offered by the AgEI program. These businesses and their founders include: AccuGrain, Ryan Augustine; Agriculture Concepts and SmartAg, Colin Hurd; Annie Johnson Equestrian, Annie Johnson; Arctic Stick, Brandon Adams; Buckeye Fish Company, Joe Sweeney; ClinicNote, Tyler Fox, Justin Coadrake, Morgan Hampel; Continuum Ag, Mitchell Hora; FieldMaxx Water Management, Rusty Johnson; G-Pops Popcorn, Garrett Ley; HydroMax, Peter LaMair; Inland Sea, Jackson Kimle; KinoSol, Clayton Mooney, Mikayla Sullivan, Elia Gehrke, Elise Kendall; Kleener Image Landscape Supply, Andy Kleen; Maier Trenching, Brandon Maier; Mairet’s Garden Center, Shane Mairet; PigGene Sustainable Solutions, Karl Kerns; ScoutPro, Michael Koenig, Holden Nyhus, Stuart McCulloh; Terva, Steven Brockshus; Wolter’s Custom Yardens, Josh Wolters.

“AgEI has offered vital resources that have helped with every stage of my startups. From the incubator and roundtables, I’ve been able to join and participate in a community that is moving the Iowa startup ecosystem forward. It’s welcoming and rewarding for anyone with an entrepreneurial spirit,” said Clayton Mooney, co-creator of KinoSol.

The future is bright for the AgEI program and the students it has the opportunity to serve. We thank all of the students, supporters and donors who have made the last 10 years remarkable and look forward to continuing a relationship with you to make the next 10 just as great!
In 2015, the American Farm Bureau held their first Rural Entrepreneurship Challenge—a shark-tank style, national competition where entrepreneurs who have agriculture or food businesses can pitch their ideas to a panel of experts, for the chance to win up to $30,000. Iowa State alumni and former students of the Agriculture Entrepreneurship Initiative (AgEI) took first place the inaugural year and again in 2016.

Lisa Benson, Director of Rural Development with the American Farm Bureau Federation, in Washington, D.C., said both winners did an excellent job demonstrating how their product benefitted customers.

“We were really excited about ScoutPro and Michael Koenig and Stuart McCulloh winning in 2015. The judges were really impressed with their idea, how far they had gotten in its development, and that their business idea was very scalable,” said Benson.

ScoutPro (Koenig, ‘12 ag education, and McCulloh, ‘13 ag education) partnered with Iowa State University Extension to create a crop-scouting and pest-identification mobile app.

“Very similarly, this year, when Ryan Augustine (’12 ag studies) won with his business AccuGrain, the consensus among the judges was that the business was really scalable and met a very specific need. Ryan was really good about saying, “Here’s the cost of our product and here’s the money you can save.” It was a really nice value proposition,” Benson said.

AccuGrain uses x-ray technology to inventory flowing grain in real time. Augustine collaborated with Iowa State University physicist and Adjunct Associate Professor Joseph Gray, to adapt Gray’s patented, position-sensitive x-ray technology to his commercial concept.

Kevin Kimle, director of the Agricultural Entrepreneurship Initiative, says the entrepreneur

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AgEI Alumni Named American Farm Bureau Entrepreneur of the Year for Two Consecutive Years
skillset includes the ability to recognize where there are opportunities, collaboration and communications skills, and “utter persistence”—traits possessed by these Challenge winners.

Each year the Rural Entrepreneurship Challenge prize money totals $145,000. The top prize winner receives $30,000 and semi-finalists and finalists receive the balance.

“Our goal with that money is to help people take their business to the next level,” said Benson. “We don’t restrict how people use that money. We know that each business is unique and we want the entrepreneur to figure out what’s the best way to use the award.”

Benson says winners have used the award to invest in greenhouse production facilities, create prototypes of new products they’ve designed, hire copyright and patent lawyers to help them protect their intellectual property, hire new employees, and pay for company vans.

“We were pleasantly surprised that, while both of our winners were from Iowa State University, both ideas were ag technology ideas. That’s an area we see a lot of growth in and a lot of interest from investors,” said Benson.
Without the opportunities provided through Ag EI, I would not be where I am today in terms of having started my own business. I am grateful for each of these experiences.
Experts say fifty-six percent of Iowa farmland will be exchanging hands in the next ten to twenty years. One Iowa State University student is taking advantage of this opportunity to tap into the agricultural market. Steven Brockshus, senior in ag and life sciences education, found inspiration from a trip to Japan in 2014.

While in Japan, Brockshus had the opportunity to explore the agricultural industry. He says he was astonished that “much of the farmland is considered fallow because owners aren’t able to tend the land properly, if at all. When I returned home, I decided there had to be a better way for people to find the right land to farm.”

This year, Brockshus founded Terva, a name he derived from the words terrain and value. By aggregating farmland real estate data, Terva provides a simple, map-based, web interface and online marketplace “to connect farmers with the right farmland at the right time,” said Brockshus.

With the launch of the first product to take place at the end of summer 2016, Brockshus is optimistic for the future. “The market for Terva is nationwide. After the launch, we’ll work with our mentors, partners and customers to improve our product with the Iowa user-base, then expand throughout the Midwest and nationally after that,” said Brockshus.

“When farmers gather at the local elevator or coffee shop, they always talk about commodity prices, weather and land. By bringing the farmland real estate industry online, we’re creating the ideal situation for farmers to talk about and share upcoming farmland sales online,” added Brockshus.

By using this strategy, the Terva team is looking to create a viral growth loop for the Terva platform, with the ultimate goal of helping more people find the right land to farm.

Brockshus has already found success with this product as a new startup entrepreneur. Terva (under the name “Tillage”) took first place at the ISU Pappajohn Center for Entrepreneurship Ames Startup Weekend in December 2015. Because of this win, Brockshus was given the opportunity to participate in the University of Iowa Venture School in Des Moines, a six week intensive program to uncover customer’s needs and develop a viable business model. Brockshus was also accepted into the ISU CyStarters student accelerator program that took place during summer 2016.

Brockshus attributes his business's success to the AgEI program. “Without the opportunities provided through Ag EI, I would not be where I am today in terms of having started my own business. I am grateful for each of these experiences,” said Brockshus. “The next great achievement we are looking forward to is getting our first paying customer, which will help solidify Terva as a business that truly helps others.”

For more information on Terva, please contact Steven at sabrockshus@gmail.com. You can also find Terva on Twitter, @terva_land, and via the company website at www.terva.co/#intro.
IN 2015, WHILE A SENIOR IN AGRICULTURAL SYSTEMS TECHNOLOGY AT IOWA STATE UNIVERSITY, AND AFTER SPENDING TWO SUMMERS AS AN INTERN WITH CONSULTING COMPANIES, MITCHELL HORA SET OUT TO START HIS OWN BUSINESS. HORA’S GOAL WAS TO HELP FARMERS ACHIEVE OPTIMAL SOIL HEALTH.
As the founder of Continuum Ag, LLC, Hora provides agricultural consulting and data management with a focus on testing, analyzing and improving soil health. Continuum Ag is based out of Washington County, Iowa. The company was incorporated in January and serves Iowa farmers as well as consultants in western Iowa, Minnesota, and South Africa.

**HORA’S BUSINESS EXTENDED BEYOND IOWA FROM THE VERY BEGINNING.**

“There are people across the world who need improvements in agriculture in order to grow and become successful,” Hora said. “I was able to help a South African farmer make sense of soil health data and work toward improving African soils. I always hoped to be able to help African farmers, I just didn’t know I would be able to do so with my first customer.”

Hora is looking to expand his services into new markets. “I currently have a core group of growers in southeast Iowa, as well as consultants throughout the Midwest that I am helping. I have been working towards expanding to help manure, cover crop, and biological additive companies show the value in their products. With the soil health tool we can quantify the effects of these products. By helping these companies sell products my services can be utilized on a large scale,” said Hora.

Within the U.S., Hora’s hope is for Continuum Ag, LLC to continue to grow and begin offering additional services, such as C:N ratio testing and other soil services. “As a young entrepreneur, conservationists in my area are encouraging me to leap into this and move the process forward quickly. They want to help Iowa farmers and utilize Continuum Ag, LLC as the face of soil health,” said Hora “I am excited to meet with local growers and my advisors to discuss how to move forward and make a big impact in the world of soil health and overall agriculture.”

For more information on Continuum Ag, LLC please contact Mitchell at mitchell@continuumagllc.com or 319.461.9056. You can also find Continuum Ag on Facebook and via the company website www.continuumagllc.com.
TOP HONORS WERE AWARDED TO IOWA STATE UNIVERSITY’S STUDENT NATIONAL AGRI-MARKETING ASSOCIATION (NAMA) chapter during the association’s annual conference and trade show, April 13-15 in Kansas City, Missouri.

The Iowa State chapter won First Place Outstanding Student Chapter based on these activities: chapter management, chapter programs, membership recruitment, fundraising and financial management, chapter communications, and career development. This is only the second time Iowa State University has had this honor bestowed on their NAMA chapter.

The Iowa State students also participated in the association’s Student Marketing Team Competition. To compete, students developed a business plan and professional presentation to market a new product or service. This year the team marketed BackGround Check, a map-based, land valuation tool. The team was judged by a series of panels comprised of marketing and agribusiness professionals. The chapter’s marketing team advanced to the semi-final round of competition (top 12 teams), competing against teams from 31 other universities. Iowa State NAMA was presented second place honors in the John Deere Signature Award competition, for overall points accrued for student participation, involvement in the national competition, scholarship awards and its annual report. Additional awards included a Chapter Performance Award for Outstanding Chapter Communications and the team was voted the “Chapter You Would Most Like to be Friends with on Facebook.”
TEAM MEMBERS INCLUDED:
Tony Behnke, Jenna Baldwin, Marshall Dolch, Jennifer Elliott, all seniors in ag communications; Josh Earll, senior in ag and life sciences education; Kilah Hemesath, Garrett Ley, Natalina Sents, all seniors in ag business; Shannon Hoyle, senior in public service and administration in ag; Rachel Lium, senior in public relations; Kelli Weaver, senior in marketing; Morgan Ball, junior in ag and life sciences education; Cody Cassaday, junior in ag engineering; Lexi Delaney, junior in animal science; Joni Erwin, junior in ag business; Lexi Marek, junior in public service and administration in ag; Allison Bastian, sophomore in ag business; Hannah Pagel, sophomore in ag and society; Josie Burgett, Nathan Kimle, Rebekah Sletten, all freshmen in ag business; Rylee Derrer, freshman in animal science; Kayla Dietz, freshman in ag and life sciences education; and Cathryn Yoder, freshman in ag and society.

The team is coached by Carly Cummings and Amanda Blair, Agricultural Entrepreneurial Initiative program coordinators, and Marcie Stevenson, graduate student and research assistant in economics-AGLS.
Majoring in Horticulture, Whitney Pokorny, was looking for an opportunity that allowed her to turn classroom knowledge and experiences into practical, real-world situations. The AgEI program helped Pokorny find an internship with Nature Road Farms. The internship provided experiences in the application of food safety standards, fertilization regimens, and drip irrigation systems. Traveling across the state of Iowa, Pokorny also had the opportunity to work with many other farm operations and gained a better understanding of how different produce and farming operations can function.

“This adventure helped me to see how there are so many different ways to start a farm and let it grow, and it helped me to get some ideas of what I might want to do on my own farm someday,” said Pokorny.

Josie Malecek, a student in agricultural business at Iowa State University, was looking for an internship that allowed her to step beyond her usual roles. Through opportunities provided by the Agricultural Entrepreneurship Initiative, Malecek obtained a semester internship with AgriSync, which extended into summer. AgriSync utilizes mobile video to connect farmers and their advisers.

Serving as the Customer Support Intern for AgriSync, Malecek strengthened her communication and marketing skills by creating customer testimonial campaigns and marketing components. As the front-line, point of contact, Malecek was an integral and important part of the AgriSync team, charged with ensuring users’ support needs were regularly being met. Throughout her experience Malecek gained sales experience, while supporting the AgriSync product.

“My experience with AgriSync has been phenomenal. I've had the opportunity to gain hands-on experience, and learn a great deal from many experts in the agriculture industry. I couldn't have asked for a better or more talented team to work with this summer than everyone at AgriSync. It truly has been a great learning experience,” said Malecek.
With the goal of developing a comprehensive knowledge of what’s required to make a CSA farm successful, Dominic Snyder embarked on an AgEI internship with Mairets Garden Center located in Muscatine, Iowa. During this experience, Snyder was hoping to gain a full understanding of the type of labor and inputs that are required to make a business function and the financial backing that is needed. Unfortunately, during Snyder’s internship, a hailstorm swept through the Muscatine area damaging beyond repair the majority of the crops. While this was unexpected and there was little that could be done to salvage many of the plants, Snyder was still able to learn many practical lessons and the risks associated with starting a business.

“As an entrepreneur you’re going to face adversity at times. Successful entrepreneurs will find a way through the tough times. That’s why I enjoyed working for Shane. He found a way to stay positive no matter what happened,” said Snyder.

With previous experience within the aquaculture industry, Jacob Lauver, agricultural studies major, wanted to find an internship that allowed him to continue to advance his knowledge in the field. Through previous AgEI internships, Lauver was able to join the VeroBlue Farms team, a Barramundi Sea Bass facility. Over the course of the summer, Lauver was involved with research projects that analyzed the correlation between barometric pressure and fish feeding times.

“The AgEI Program has opened many doors of opportunity for Iowa State students like myself. This program helps you get connected with new industries in the state such as Aquaculture,” said Lauver.
Providing students with a unique portfolio of entrepreneurial opportunities, while helping them to develop the skills necessary to succeed as entrepreneurs in the industry, is the Agricultural Entrepreneurship Initiative’s (AgEI) mission.

In order to achieve this mission and strengthen the program, AgEI created a student advisory program. Leading Iowa State College of Agriculture and Life Sciences students are selected as advisers to help develop and shape program offerings that meet the needs and aspirations of the student body. This year, eight selected students brought fresh perspectives on the current program structure, offered improvements for this framework, and provided ideas for new programs that could be offered through the AgEI program.

THE 2015-2016 SAT MEMBERS

JOSH EARLL, ag and life sciences education
JENNIFER ELLIOTT, agriculture communications
TREY FORSYTH, agricultural business
ALEX HAGE, agricultural business
SHANNON HOYLE, public service & administration in agriculture

JENNA LANSING, animal science
GARRETT LEY, agricultural business
LEXI MAREK, public service & administration in agriculture

2016 AGEI SCHOLARSHIP RECIPIENTS

Each year, the Agricultural Entrepreneurship Initiative (AgEI) awards 5 scholarships to students who have invested much time and effort into the program and who have expressed an interest in entrepreneurial careers.

Ryan Pellett Family Scholarship - $1,500
Mitchell Hora, agriculture systems technology
Mikayla Sullivan, global resource systems

Bob Jolly Scholarship - $1,500
Joni Erwin, agricultural business
Lexi Marek, public service and administration in agriculture

Murray R. Wise Scholarship - $10,000
Garrett Ley, agricultural business
The Iowa Farm Bureau Federation (IFBF) has played an integral role in the success of the Agricultural Entrepreneurship Initiative’s (AgEI) effort to provide students with practical business development and entrepreneurial experiences essential for their success in future careers and endeavors. Their continued support, through a $100,000 annual contribution, has allowed the AgEI team to grow the portfolio of student program offerings and expand the outreach focus of the initiative.

AgEI programs supported by IFBF’s contribution have included the annual Farmer Entrepreneur Panel and the Student Business Incubator.

Since its fruition, the Farmer Entrepreneur Panel has morphed into what is now the Farmer Entrepreneur Roundtable. Substituting the roundtable for the panel has allowed over 100 undergraduate students the opportunity to talk with 15 entrepreneurial farmers, financial advisors, and agribusiness professionals. The panel structure only accommodated five guests and limited conversation.

On (insert date), roundtable conversations were largely focused on succession planning and adding value to family farming operations. Other dialogue included understanding the importance of global marketing implications on U.S. farming operations and how to transition back into the family farm after working in the corporate world.

Many students will not have the opportunity to return to the family farm upon graduation. This has forced them to look elsewhere for farming opportunities, including elderly farming neighbors. Questions about this topic arose throughout the evening. Matt Danner, partner in Templeton Family Farms, advised the group to build a relationship with the farmer first to gain trust and show a desire to continue what they have worked so hard to build.

**Farmer Entrepreneur Roundtable Guests Included:**

Matt Danner – Templeton Family Farms  
Steve Ferguson – Iowa Ag Development Division, Iowa Finance Authority  
Scott Henry – Longview Farms  
Steve Henry – LongView Farms  
Nathan Katzer – Iowa Department of Agriculture  
Mark Kenney – Kenney Farms  
Steve Kerns – Kerns Farms  
Linda Naeve – Nature Road Farm  
Randy Naeve – Nature Road Farm  
Kevin Ross – Ross Farms  
Brent Schipper – Schipper Family Farms  
Scott Thellman – Juniper Hill Farms  
Amanda Van Steenwyk – Iowa Farm Bureau Federation  
Bill Wyant – Fireside Winery  
Rona Wyant – Fireside Winery

On behalf of the College of Agriculture and Life Science administration and the Iowa State Foundation, the AgEI team thanks the Iowa Farm Bureau Federation for their continued generosity.

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**Water Innovation Competition**

The Iowa Farm Bureau Federation and AgEI have teamed up to host the first annual Water Innovation Competition. Jeff Stamp, successful entrepreneur and inventor of Baked Lays®, will take participants on a journey through the innovation process to help them create a solution for water quality issues in Iowa. The event will be held at Iowa State University, September 1-2, 2016. Contact Amanda Blair at 515-294-4945 or acblair@iastate.edu if you are interested in participating.
The Agricultural Entrepreneurship Initiative would not be a success year after year without the support of many friends, donors, and students. To thank them for their continued contributions, the AgEI program, along with Harry Stine of Stine Seed and Bruce Rastetter [Summit Agricultural Group], host an annual Holiday Appreciation Celebration. Guests gather at the Stine Barn in West Des Moines, IA where they are welcomed with warm conversation and a delectable dinner.

This year’s celebration was nothing short of blissful. On (insert date), over 150 guests enjoyed visiting with fellow supporters and AgEI students. Remarks were made by Harry, Bruce, and Kevin Kimle, AgEI Director.

A special thanks to Harry and Bruce for hosting and for their continued support of the program. Additionally, we wish to express our sincere gratitude to all AgEI supporters. Without their commitment to the success of student start-ups and entrepreneurial programming, the AgEI program could not be successful. A complete list of the program’s supporters can be found on the back page of this Startups magazine edition.
After several years of highly volatile cattle markets, Jolene and Kirk Pisel were looking for a way to add value to their cattle operation. In 2009 they launched JoKir’s Wild to allow for the family’s locally raised and processed, state inspected, natural Black Angus, dry aged, beef cuts to be sold in retail locations. Jolene (Jo), Kirk, and their daughter, Lacy, spent many hours working to create a product comparable to what was only available in fine steak houses and specialty meat shops.

As the success of the business continued, they once again sought the opportunity to expand their product offerings. Cyburdog, a new product to utilize surplus ground beef, was conceptualized. Since conception, the JoKir’s Wild team and Semester, Inc. interns have been working with Iowa State University to create a co-branded and licensed product. This unique partnership has allowed for the business to tap into a new market and expand their customer base.

The Pisels found the opportunity to work with the Agricultural Entrepreneurship Initiative’s Semester, Inc. program, during product development, a huge asset.

“Having AgEl students working with us allowed us to get valuable feedback for a truly authentic Iowa State University product that has been inspired, designed, tested and endorsed by the Iowa State University community. All the goals that we set were met, if not exceeded, by the four interns in two short semesters,” Jo Pisel explained.

Semester, Inc. interns, working alongside the JoKir’s Wild team, were given many unique and hands on experiences. Fall semester interns assisted with developing business growth strategies, conducting market research, and finally introducing the possibility of a co-branded product with Iowa State University.

Product development was a huge project for spring semester interns as they held sampling sessions during campus events to gather customer feedback. The students then assisted with the licensing and labeling process and worked to identify other retailers to sell this specialty product.

“Ensuring the interns had a successful learning experience has led to the culmination of many people working together on a project that has the potential to take our business to a new level of success,” said Jo. “The Agricultural Entrepreneurship Initiative is an exceptional program. Working with the staff and students has been a highlight in our business venture.”

If you would like more information on how to get your organization involved with Semester, Inc. please contact Amanda Blair at aclair@iastate.edu or 515.294.4945.
Providing students with hands-on, practical, and experiential learning opportunities continues to be a top priority for the Agricultural Entrepreneurship Initiative. One way the program has successfully provided these experiences to students is through the Domestic Development and Entrepreneurship in Agribusiness (DDEA) program.

This past fall, the second DDEA cohort of nine College of Agriculture and Life Sciences (CALS) students partnered with Harrisvaccines, now an entity of Merck Animal Health, on a market analysis project. Harrisvaccines revolutionized the swine vaccine market with their synthetic vaccine replication technology. After 10 years of solely focusing on the swine market, Hank and Joel Harris, founder and vice president of Harrisvaccines respectively, came to AgEI with a vision for expansion into other animal species markets; their first choice was poultry.
During the semester, the student consulting team extensively researched the layer, broiler and turkey vaccine markets to identify potential opportunities for the company to expand and diversify. An outbreak of avian influenza in the U.S., while unfortunate, became an opportunity to expose the students to real-life pressures.

“By working through the DDEA program, I had the opportunity to learn about and work in an industry in which I had very minimal previous experience,” explained Jenna Lansing, senior in agricultural business. “Teamwork, communication, strategic planning, and critical thinking were among the many key skills I developed through this project. This hands-on experience gave me the confidence to tackle projects in areas of unfamiliarity and aid in the development of new ventures for an entrepreneurial company.”

As a part of their project, students had the opportunity to travel through Iowa, Missouri and Arkansas to meet with industry professionals. The Missouri Department of Agriculture, Mizzou Animal Science Research Center, and University of Arkansas’s Center of Excellence for Poultry Science were among the many stops along the way.

Following their research on the road, the students spent the rest of the semester analyzing the information they had received through primary and secondary resources, composing a market analysis, and presenting a final recommendation to Hank and Joel Harris.

“Harrisvaccines, now a part of Merck Animal Health, utilized Iowa State University’s Agricultural Entrepreneur Initiative during our development of the first H5 High-path Avian Influenza virus vaccine, using our novel technology in order to gain a better understanding of the commercial implications of such a vaccine,” said Joel Harris. “In partnering with AgEI, we were able to gain valuable insight into the U.S. poultry market during the emotional and economical devastating H5 outbreak of 2015.”

Harrisvaccines was able to create the first avian influenza vaccine that was granted a USDA conditional license during the time the students were working on the project. The educational experience provided to the students was second to none. We thank Joel and Hank Harris for providing this opportunity for our students and for supporting the AgEI program.

If your company is interested in participating in future AgEI Domestic Development and Entrepreneurship in Agribusiness program, please contact Amanda Blair at (515) 294-4945 or acblair@iastate.edu.
IN MAY 2016, TWELVE IOWA STATE UNIVERSITY COLLEGE OF AGRICULTURE AND LIFE SCIENCES UNDERGRADUATE STUDENTS embarked on an 11-day international food culture and entrepreneurship trip to Italy through the Agricultural Entrepreneurship Initiative (AgEI).

The group was sent to Italy as part of a multi-client business development project. The AgEI’s International Development and Entrepreneurship in Agribusiness program sends small teams of students to research international development projects. Prior to the trip, students prepared by attending class twice a week to familiarize themselves with Italian culture and conduct market research on industries they would be observing while abroad with the help of Italian students participating in an exchange program.

While in Italy, students traveled to several different cities and had the opportunity to experience Italian agriculture first hand. They met with business leaders in the food industry and other government and policy officials. They visited several Italian agri-businesses, including a Parmiggiano Reggiano cheese factory, a Prosciutto de Parma cured meat facility, and the famous Barilla headquarters. Small, mid-sized, and large scale dairy, pear, and balsamic vinegar production facilities were also toured in the Emilia-Reggiano region. Students had the chance to visit the Universita de Bologna, Europe’s oldest university, and learn about their agricultural entrepreneurship program. Fun was also had along the way as the group visited popular historic and tourist destinations, including Florence’s Duomo and Mercato Centrale, and Rome’s Colosseum and Vatican.

At the conclusion of the trip, the students were required to assess and formalize their findings by compiling a multi-client report, focusing on the different industries that were studied during their in-country experience.
The AgEI Program Staff and Students would like to thank the many entrepreneurial ventures that participated in this endeavor and the many individuals who assisted in the planning and coordination of this trip. It is projects like these and companies like yours that give students the real world experiences needed to succeed in their future careers.

STUDENTS PARTICIPATING IN THE 2016 IDEA PROGRAM INCLUDED:

Lisa Bjelica, Agricultural Business, Charles City, IA
Josie Burgett, Agricultural Business, Pleasantville, IA
Izak Christensen, Agricultural Business, Osage, IA
Nick Dittmar, Agricultural Business, Richmond, IL
Jennifer Elliott, Agricultural Communications, Monmouth, IL
Joni Erwin, Agricultural Business, Crawfordsville, IA
Ellie Flickinger, Agricultural Business, Hampton, IA
Trey Forsyth, Agricultural Business, Charles City, IA
Kilah Hemesath, Agricultural Business, Decorah, IA
Jenna Lansing, Agricultural Business, Worthington, IA
Garrett Ley, Agricultural Business, Alleman, IA
Shannon Rodeffer, Agriculture and Society, Snohomish, WA

The IDEA program was led by Kevin Kimle, AgEI Director; and Amanda Blair and Carly Cummings, AgEI Program Coordinators.
The Agricultural Entrepreneurship Initiative at Iowa State University relies on outside partners for International and Domestic course projects, as well as opportunities for students through internships. These experiences offer students real-time, hands-on learning opportunities valuable for their future entrepreneurial endeavors.

OPPORTUNITIES FOR PARTNERSHIP:

*International Development & Entrepreneurship in Agribusiness (IDEA)* – Partnering agribusiness organizations offer student consulting teams a hands-on learning experience in an international arena. Specific deliverables are defined as a part of the innovative business development project. During the course, students conduct needed in-country market research, financial analysis, etc., as it pertains to the project, creating a comprehensive final summary document and oral presentation to be presented to the partnering business’ board of directors.

**PAST PARTNERS:** MACEDONIAN THRACE BREWERY, WEST CENTRAL COOPERATIVE, REMBRANDT ENTERPRISES

*Domestic Development & Entrepreneurship in Agribusiness (DDEA)* – Similar to the IDEA program, DDEA offers students a hands-on learning experience in the domestic arena through partnership with agribusinesses.

**PAST PARTNERS:** HAGIE MANUFACTURING, HARRISVACCINES

*Summer Internship Program* – Entrepreneurial focused businesses offer students a unique and exciting summer opportunity to gain real world work experience. Interns work side-by-side with entrepreneurs, learning from them and contributing to their business. Employers are encouraged to allow students to take part in and view the businesses’ internal operations in order for students to gain a better understanding of the fundamentals of developing and running their own business.

*Semester, Inc. Internship Program* – Selected companies offer students unique internship opportunities throughout the school year. Projects are typically research based, creating marketing plans, business analyses, and financial models essential for a company’s ability to develop new products or services. Students work a majority of their hours in the AgEI office at Iowa State. Interested in proposing a project?

Contact Amanda Blair at 515-294-4945 or acblair@iastate.edu
A seed of innovation was planted while Colin Hurd operated a sprayer during an internship with a large-scale farming operation in Iowa, in the summer of 2010.

“The corn was just starting to come up and I noticed the corn was yellow and shorter where the planter tires had been,” said Hurd (’13 agricultural studies). The soil had become compacted from the weight of a large-scale planter, reducing air, nutrients and water to the plant roots and restricting root development and, ultimately, yield.

Hurd didn’t think about it again until he was in an agricultural entrepreneur class in 2011. Students in the course were asked to develop an original business concept that solved a problem. Hurd’s idea was to attach a tillage implement to planters that would break up soil compaction behind the tires as planters moved through fields. He researched the problem and pitched his idea in class to a panel of experts. Feedback and recognition from the experts motivated him to continue developing his concept. Over a period of two years, Hurd experimented with old tillage parts, worked with an engineer to create a new design, secured a business partner, established the corporation Agricultural Concepts, pursued marketing and distribution strategies and had the final design tested through Iowa State. The Iowa State research showed Hurd’s product, TrackTill, reduced compaction by 16 percent and increased yield in the center rows by 8 bushels. “That meant the average farmer could look at TrackTill as an investment in yield and expect a payback within two years. That’s pretty significant. Farmers make a lot of investments that typically have four- to five-year paybacks,” said Hurd.

Hurd released his product in January 2014. By the spring of 2015, 60 people across the country, from Delaware to Kansas, were using TrackTill. At that point Hurd had a year of sales under his belt, understood the value and the market for it, and had a lot of ideas on how to move it forward. But with only himself and Kyle Meyer, an engineer (’05 agricultural studies), on board, he either had to hire more sales people and more engineers or license it. Yetter Co. was interested in a license and had a national sales and distribution network. Hurd was certain they could get it to market a lot faster and could likely lower the price.

“My goal with Smart Ag is to integrate technology and machinery a lot better”
“The ultimate goal I always had for TrackTill was to make it acceptable and valuable to as many farms as possible and licensing it to Yetter was the best option for doing that,” said Hurd. He licensed TrackTill to Yetter Co. that spring.

Hurd says the Iowa State degree that he chose has served him well. Learning “a little bit about a lot of things,” including animal science, business, economics, marketing and agronomy, gave him a broad perspective on agriculture and allowed him to find out what he enjoyed doing.

“I was really drawn to the business side of it. And then the ag entrepreneur program broadened my perspective of what it means to work in business,” said Hurd. “People sometimes think that going into business means you’re going to go get a job with a major corporation and work your way up the ladder. But the entrepreneur program teaches you there are alternatives to that traditional path. You don’t have to have a roadmap all laid out for you; you can make your own roadmap based on your own ideas.”

Since the course, Hurd has not stopped thinking like an entrepreneur. While working with TrackTill customers he noticed many were struggling with technologies designed to collect and manage field data. In November 2015, he established a second business, called Smart Ag.

“My goal with Smart Ag is to integrate technology and machinery a lot better,” said Hurd. “We’re trying to take a different approach and allow farmers to access technology that’s capable of doing really advanced stuff, at consumer-grade prices. We recognize a lot of the benefits exist today that no one has yet brought to the farm, like cloud computing, accessibility, data flow and data exchange. Farmers are still struggling a lot with the ability to move and manage their data. Part of our goal is to make that an easier process.”

Hurd anticipates public release of a new Smart Ag technology this fall. In the meantime, he and Meyer are working on a better bale spear and corn stalk chopper. And he hasn’t stopped thinking about the problem of soil compaction.

“What TrackTill didn’t solve was: why the soil was compacted in the first place,” said Hurd. “One question that Smart Ag continues to ask is: can we prevent compaction entirely?”

For more information about Smart Ag, see http://www.smart-ag.com/.
Value-added agricultural products have created endless opportunities for producers across the nation, allowing them to take advantage of niche markets and establish profitable businesses. Changing a raw agricultural product into something new using different methods of packaging and processing has a large impact on economic markets. One Iowa State student understands the value of these products and, using his entrepreneurial skills, has made it his mission to provide these products to consumers through his business. Garrett Ley, senior in Agricultural Business, has developed a business specialized in creating a value-added product: G Pop’s Popcorn.

GARRETT’S BACKGROUND
Ley’s entrepreneurial spirit was present long before his time at Iowa State University, and long before he started G Pop’s Popcorn. During middle school and high school, Ley managed several backyard businesses including Ley’s Eggs, G & G’s Produce, and GLEYZD Donuts. During a part-time sales job with Snappy Popcorn, Ley recognized an opportunity to add value to the popcorn industry. Through his current business, Ley creates and sells gourmet flavored and colored popcorn. Some of his flavors...
LEY’S POPCORN

“The AgEI program not only helped guide my idea into a business, but created an environment that was energetic and fun to be around.”

include Caramel, Caramel Apple, Fruit Salad, and Autumn Splendor.

“I want to live a life of ownership within my business and community. I want to make a difference in communities and put a new face on rural entrepreneurship. I am going to conduct business that is aligned with my personal values. I want to create an environment by not putting my products first, but my people, and letting them focus on the products,” said Ley.

Ley has been a valuable member of the AgEI program since the beginning of his journey at Iowa State. He has attended several roundtable events, farmer panels, and industry tours. He was also involved the internship program, NAMA club, and student advisory team. And he used his time in Kevin Kimle’s Econ 334 - Entrepreneurship in Agriculture course to set his business on fire.

“The AgEI program not only helped guide my idea into a business, but created an environment that was energetic and fun to be around. Getting students together that have the same interest in entrepreneurship can really get your wheels turning, and it sure did for me! I value the roundtable events, program staff, and internship opportunities that the program has to offer,” Leysaid.

WHAT LIES (“LEY’S”) AHEAD
Ley is currently in the process of planning the construction of a new production facility located in Des Moines. He hopes to have a strategic launch into the Des Moines retail market at the end of summer 2016, primarily selling to Hy-Vee and Fareway. He will also offer a private label service.

When asked, “What advise would you give other students pursuing business opportunities?” Ley replied, “Finding a passion and running with it.”

WWW.AGEI.IASTATE.EDU
Agricultural Entrepreneurship Initiative Helps Launch New Initiative to Foster Entrepreneurs at ISU Research Park

A new initiative at the Iowa State University Research Park will identify and fund innovative agricultural startups. The accelerator program, called the Ag Startup Engine, is part of a broader Iowa State initiative that is working to foster business startup, innovation and technology transfer.

“Ag Startup Engine will deliver funding, mentorship and support to agricultural entrepreneurs with promising business concepts,” said Kevin Kimle, director of the Agricultural Entrepreneurship Initiative. “Because of our rich network of entrepreneurs and agribusiness leaders, the launch of this business startup program is a very natural and significant progression of our support of agricultural entrepreneurs.”

The Agricultural Entrepreneurship Initiative assisted in the creation and development of Ag Startup Engine, which is a private-sector entity. Ag Startup Engine will be governed by a small number of investors. Examples of investors include Ag Ventures Alliance, Summit Agricultural Group and Ag Leader Technology. “This program will help identify the next generation of innovators and leaders in agriculture and we are so pleased to be part of it,” said Al Myers, founder and president of Ames-based Ag Leader Technology, a technology innovator of precision agriculture hardware and software. “Entrepreneurs will shape the future of agriculture, and we look forward to supporting development of the technologies and businesses they create.”

Ag Startup Engine will provide agricultural entrepreneurs — including ISU students, faculty and staff, and non-university entrepreneurs — a means of moving from an early business concept to an investment-ready business. The program will implement infrastructure for mentoring, rapid prototyping, product development and customer development. It also will provide a critical element that often is in short supply for entrepreneurs in Iowa — a structured pathway for financing a business.

Kevin Maher, founder of GlobalVetLink, PetMeasure and Maher Technologies, played a lead role in development of Ag Startup Engine and will serve as Program Director. “More than 15 years ago, I founded my first business in the ISU Research Park,” Maher said. “I am excited to help continue to build a startup environment at the ISU Research Park that makes it a destination for high-impact agricultural entrepreneurs.”

Jude Conway, executive director of Ag Ventures Alliance of Mason City, said, “Ag Startup Engine is a great fit for our organization and our business development for value-added agricultural ventures.”

ISU’s Agriculture Entrepreneurship Initiative will provide mentoring support for the entrepreneurs, said Kimle. “The potential is substantial for both agricultural entrepreneurs and Iowa State University. We are pleased to be supportive of efforts at startup creation and technology commercialization,” he said.

TWO BUSINESSES IN AG STARTUP ENGINE

SmartAg, LLC – Colin Hurd is working on his second startup after exiting his first successful business, Agriculture Concepts. Smart Ag is focused on — “Feeding the World Smarter.” They are developing software and hardware which will enable farms to use and benefit from internet connected machinery, supervised and fully autonomous equipment, data to machine integration, and advanced path planning.

Gross-Wen Technologies – Gross-Wen Technologies is commercializing an algal wastewater treatment technology developed at ISU. Led by recent ISU PhD recipient Martin Gross, Dr. Zhiyoun Wen, and Dr. Darren Jarboe, the technology, which has three pending patents, is called the Revolving Algal Biofilm Treatment System. It has achieved over 10x higher treatment rates than conventional algal treatment systems. Gross-Wen Technologies was recently awarded a 2016 USDA Small Business Innovation Research grant to further develop their algal treatment technology.
THANK YOU

volunteers, supporters, donors

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For more information on how we can work together to inspire students and impact the future of agriculture through the programs offered by the Agricultural Entrepreneurship Initiative, visit us on campus at 0030 Curtiss Hall or on the web at www.agideasisu.com