

College of Agricultural Sciences and Natural Resources

Pair focus is on sustainability

By his own admission, a year ago Joshua Loomis

knew little to nothing about birds. Now he can stand in a field and identify birds by listening to their calls and songs.

Aaron Price is building on environmentally friendly practices started by his father, and envisions the family ranch benefiting future scholars and others.

Loomis and Price are examples of how students in the College of Agricultural Sciences and Natural Resources are working outside the classroom to preserve and enhance natural resources.

Loomis, a fisheries and wildlife junior from Doniphan, worked full-time last summer on 18 organic farms throughout Nebraska and northern Kansas. He was hired by a University of Nebraska–Lincoln doctoral student, John Quinn, who was completing research for his dissertation.

Identifying birds through sight and sound was a first step toward improving bird diversity on the farms, Loomis said, adding he hopes to show how farmers are interested in preserving wildlife and natural habitat.

“Nine out of 10 farmers I’ve met are concerned about biodiversity,” Loomis said.

Many days the job required Loomis to be in the field at 6 a.m. Using GPS software, he and Quinn stood at random locations on the farms, looking and listening for birds.

They identified 108 bird species.

Joshua Loomis, a fisheries and wildlife junior from Doniphan, learned to identify birds through sight and sound while working last summer on organic farms throughout Nebraska and northern Kansas.



Donald Peterson



Bob Price

Aaron Price, a natural resource and environmental economics senior from Burwell, stands by a wagon used by his great-grandparents. Price is helping enhance stewardship at the family ranch.

“He did a fantastic job and picked it up very quickly,” said Quinn, a natural resources graduate student specializing in applied ecology.

Not only does bird diversity enrich habitat, it can be an aspect of ecotourism for watching birds and other wildlife, Quinn said.

Land sustainability has long been a priority for Price, whose father Bob implemented rotational grazing practices for three decades on the family’s Burwell ranch. The natural resource and environmental economics senior is seeking additional environmental advancements for the ranch, such as participating in a carbon credit program.

Program participants are compensated for using no-till practices to prevent the release of carbon dioxide, which exists in the atmosphere as a greenhouse gas and can contribute to global warming. Through CASNR contacts, Price com-

pleted the application process with the North Dakota Farmers Union. The ranch just completed its first year in the program.

Price also aims to establish a wind energy project, incorporate bird habitat management plans within the current grazing system on the family ranch, and also hopes it can be the site of a prairie chicken study to look at the optimal habitat for the birds. He plans to invite graduate students there to conduct assessments on wildlife and herpetological habitat to complete thesis work while helping with ecotourism interests.

Price also has worked with a nearby ranch that is active in ecotourism.

Price’s adviser, agricultural economics professor Bruce Johnson, said Price recognizes the benefits of working to support the environment.

“That principle has been imbedded in him from his background,” Johnson said.



The Dean Says:

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We teach, discover new knowledge through research, and extend that new, unbiased information across the state and beyond through extension.

The University of Nebraska–Lincoln does not discriminate based on gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin, or sexual orientation.

One student at a time.

That's how we graduate a class in the College of Agricultural Sciences and Natural Resources at the University of Nebraska–Lincoln. It's how we build success.

One student at a time.

Each student important. Each student unique. Each student advised by a faculty mentor who understands the best education CASNR can provide is one that fits that student, and addresses that student's interests and goals.

In a way you could say that while we graduate students whose diplomas carry the same degree name, each student receives his or her own unique degree because of individualized work with the student's adviser, who helped tailor an educational program to the students' needs and goals.

This spring I write this column in the midst of troubling economic times. For any of our students concerned that today's economic situation might disrupt your education, please talk with us.

CASNR is committed to helping students stay in school. Whether through scholarships, grants, work/study opportunities, a combination of the three or others entirely, we are dedicated to helping students succeed.

CASNR's commitment to our students and Nebraska goes beyond the years students study with us. We help prepare the thoughtful citizens and leaders of a future where demands on resources and food systems will challenge sustainability.

Sustainability requires broad thinking and an interdisciplinary approach. Students can immerse themselves here in broad study areas from molecular to global that span the science of animal, plant, and human health and well-being, earth systems analysis, agricultural production and processing, global climate change, agricultural market structures, water resources and land-use change.

Our teaching faculty are excellent scientists committed to academic instruction, advising and mentoring. By example — and through curriculum — they model good citizenship, critical thinking and flexibility. It is the entrepreneurial spirit and flexibility of CASNR's faculty that provide new degree programs to meet new needs of students and Nebraska.



Steve Waller

CASNR prepares students for their first professional jobs out of college, and for acceptance to graduate programs and professional schools, depending on the students' choices. CASNR has strong relationships with many who employ CASNR graduates. Ninety-six percent of our employment-seeking grads receive job offers within six months of graduation.

Those going on to graduate school are accepted at many great schools. Some, upon receiving their baccalaureate degrees, are admitted directly to Ph.D. programs at such places as Stanford University, Texas A&M University, Purdue and Michigan State.

We help students prepare for a future in which sustainability, good citizenship, flexibility and critical thinking are vital.

It's one of the many ways we in CASNR are at work for our students, and Nebraska.

Steve Waller
Dean, College of Agricultural Sciences and Natural Resources

Grad advises farmer cooperatives

Ryan Brewster is not one to sit on the sidelines. That's why he took on the role of a USDA agricultural adviser in Iraq and Afghanistan.

"I wanted to contribute to the U.S.-led efforts," Brewster said. "I did not want to sit on the sidelines while others were sacrificing so much to stabilize these two countries."

Brewster helped organize farmer cooperatives for a year in Iraq and now is doing the same thing in Afghanistan.

The 2003 College of Agricultural Sciences and Natural Resources animal science graduate from a Butte dairy farm also earned his MBA from the University of Nebraska–Lincoln in 2005. He worked at the Western Dairy Association, and in Scottsbluff as agricultural director for former U.S. Senator Chuck Hagel. There he learned his expertise could help with reconstruction efforts in Iraq.

After training with the U.S. Department of State, Brewster flew to the Diyala province in northeast Iraq. He worked with farmer cooperatives producing eggs, dates, poultry, honey and vegetables. (See <http://www.fas.usda.gov/>. Click on "Once in a Lifetime – USDA Agricultural Advisors in Iraq.")

Brewster offered technical advice and new technologies to the farmers, whom he described as welcoming and taking pride in their work.

"Coming from an agricultural background, I was very comfortable working with (the Iraqi farmers) and they were comfortable with me," he said, adding most conversations took place through a translator.

Key concepts Brewster taught the Iraqi farmers were use of a business plan and an operating budget.

Previously, he said, the Iraqi government provided all the inputs and collected over half of the production. That has changed dramatically, with Iraqi farmers now trying to compete in the global market.



Courtesy photo

CASN, Brewster said, provided him a great education and was a perfect fit for his interests. While on campus he was a member of the meats judging team, an animal science ambassador, a meat lab employee and a genetics class teaching assistant.

"CASN not only provided the agricultural background, but more importantly provided the communication and team-building skills that are an essential part of the job," Brewster said.

A job that, while dangerous working in one of the most violent provinces in Iraq, has been rewarding.

"There were some bad times, but the good outweighed the bad and made the entire experience worth it," Brewster said. "Seeing farmers realize that things were getting better and seeing their successes was amazing."

In Afghanistan Brewster currently is stationed near Gardez, in the eastern Paktia province, through March 2010.

— Cheryl Alberts

Ryan Brewster, right, says his CASNR education and experiences helped develop communication and team-building skills essential in helping organize farmer cooperatives in Iraq. Brewster, seen talking to a member of an Iraqi poultry cooperative, now is doing the same thing in Afghanistan.

Sustainability

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"My dad has always been a real good steward of the land," Price said. "It all goes back to growing up on the ranch."

— Lori McGinnis

Calendar of Events

College of Agricultural Sciences and Natural Resources

May	8 Salute to Graduates
	9 Senior Send-off
	9 Commencement
June	8,11,12,25,26,27,30 New Student Enrollment
July	6,7,9,10 New Student Enrollment

Future beef leadership being built

Leadership specific to Nebraska's top agricultural commodity — beef cattle — is being groomed through the Nebraska Beef Industry Scholars program in the College of Agricultural Sciences and Natural Resources.

The four-year certification program for University of Nebraska–Lincoln students combines knowledge, insights and direct involvement of beef industry leaders with research-based courses taught by nationally recognized faculty.

“The beef scholars program illustrates how integral parts of the industry affect each other,” said Matt Spangler, assistant professor. “These students become good representatives of the program and the university, and are the future leaders of the beef industry.”

Nebraska is a national leader in beef. Cattle and calves were its leading cash receipts in 2008, USDA reports, and nationally last year Nebraska was second in cattle and calves with 6.35 million head.

The scholars program is a part of Nebraska's BEEF (Beef Education Excellence for the Future) initiative to enhance beef education in the state in various ways.

Laura Maricle, agricultural journalism junior from Albion, said the beef scholars program hones student interests and networking beyond the classroom with other students, faculty, staff and industry leaders.

“Through the field trips and other events, we learn, face challenges, develop network connections and become (more) employable,” Maricle said.

During an August tour across Nebraska and eastern Colorado, the scholars group visited 10 sites in six days — “everything from feedlots to the National Cattlemen's Beef Association headquarters in Denver,” Spangler said. Not only was the tour informative, he said it showcased the students and the program.

In addition, Spangler said, beef industry scholars are members of Nebraska Cattlemen and attend state meetings,



Learning outside the standard classroom is an important element of the Nebraska Beef Industry Scholars experience. Coordinator Matt Spangler, far right, discusses cattle characteristics with animal science scholar participants, from left, Barrett Huneke, Wilber; Spencer Eisenmenger, Humphrey; Kasey Wagner, Winnetoon; and Tacy Langemeier, Stromsburg.

which further expands their knowledge and networking.

Faculty and staff work closely with students to link them with beef industry professionals for internships and experiences in ranching, doing research and in communications.

The beef industry scholars program is well-received and supported, Spangler said.

“We knew people were excited when we launched the program, but we didn't anticipate the level of support and participation,” Spangler said. Supporters provide time and expertise to help the students, as well as financial contributions.

The Nebraska Cattlemen is one supporter, and in the classroom executive director Michael Kelsey discusses issues and scenarios important to the industry.

“We have a great relationship with the university,” Kelsey said. “We understand that the future heavily depends on new blood.”

“The youthful, fresh perspective is exciting,” he added. “When they understand a new idea — you can just see it.”

The program, now in its third year, has 37 students who are taking a special block of 18-24 credit hours as part of their curriculum.

Beef scholars may have careers such as seedstock breeders, ranchers, feedlot or processing managers, bankers, veterinarians, and leaders in beef and cattlemen associations.

While the beef industry is impacted by current economic trends, Kelsey reminds scholars and industry leaders they share a common goal.

“If we pull together, we succeed today and in the future,” Kelsey said, adding, “There are lots of hungry mouths in this world. We ought to be the one to feed them.”

on collaboration



Brett Hampton

Jobs await PGM graduates

Opportunities, great education and people who care — all three bring prospective students to the PGA Golf Management (PGM) program in the College of Agricultural Sciences and Natural Resources, and help them stay there, say those familiar with the program.

Terrance Riordan, program director, said great careers await CASNR's PGM graduates because of knowledge gained, talents honed and contacts afforded them.

Rebecca Hiemstra, PGM senior from Sibley, Iowa, said she appreciates the friendly, caring faculty and staff who “want the best for your career.” Many opportunities await PGM graduates, especially women, because there are few in the field.

Sage Jensen, PGM sophomore from Exeter who wants to teach golf, agreed. She said some women and children are intimidated to learn to play golf from men who have been playing the game for years, and that more courses want female instructors.

“We as women will be able to get any job we want,” Jensen said. Currently six of the 141 PGM students are female.

The CASNR program is, she said, a “perfect fit” because the faculty and staff are always willing to help out.

“It really feels like a second home,” Jensen added.

When prospective students and their parents visit the PGM program, faculty and staff spend, on average, an hour and a half with them.

It’s “to show they’re valued,” said Scott Holly, PGM internship coordinator. He added many return here to study.

CASNR's PGM program has 15 graduates. All have jobs, such as head golf professional in Arizona, working for a golf club manufacturer in California and managing a golf retail store in Lincoln.

“There are more opportunities than students,” Holly said.

CASNR PGM students must have 16 months working in the golf industry before they graduate. Travis Anderson, PGM senior from Gothenburg, has had three golf-related internships and is in the program because he wants to “enjoy going to work every day,” talking and dealing with people who, like him, love the game.

Job and internship contacts, such as the second annual PGA Golf Management program career fair Feb. 19, brought 18 employers from Nebraska, Iowa and Missouri to campus.

Bruce Lubach, executive director for the PGA Nebraska Section in Lincoln, was at the fair and has hired two CASNR PGM interns.

“I know what I’m getting and that they are well-grounded,” Lubach said. “They understand what it means to work and the value of work.”

— Cheryl Alberts



Brett Hampton

John Kudirka of Omaha and Nicholas Christenson of Stanchfield, Minn., look at golf clubs during the second PGA Golf Management program career fair in the Nebraska East Union. Nearly 120 students recently attended the fair, as did 18 employers from Nebraska, Iowa and Missouri.

A brief glimpse



Courtney Jolly

Courtney Jolly didn't start out as a diver.

Jolly began her athletic interests as a gymnast until her freshman year of high school in her hometown of Ft. Lauderdale, Fla. Injuries forced her to stop. She switched to diving because she felt that it was a similar sport to gymnastics and she loved to dive outside.

After about a year, Jolly began receiving information from colleges across the country that wanted her on their diving teams. Now, as an animal science senior in the University of Nebraska–Lincoln College of Agricultural Sciences and Natural Resources, she has won major accolades in her chosen sport.

Jolly was named Big 12 Diver of the Week last season. She was awarded the honor for her performances at the Minneapolis Invitational, where she finished first on 1 and 3 meter diving and second on platform diving, and at the Husker Invitational, where she finished first on 1 meter and platform diving and second on 3 meters.

"Big 12 Diver of the Week was a great accomplishment. The fact that I was honored by the entire conference was such a huge honor. It was so nice to be congratulated about my accomplishments through past teachers and students. CASNR has impacted me in a way that has taught me to challenge myself."

—Lori McGinnis

National honorees at work

When someone says teaching and advising in the College of Agricultural Sciences and Natural Resources are nationally outstanding — even distinguished — people like Tiffany Heng-Moss and Joan Krush prove them right.

Heng-Moss, associate professor in the Department of Entomology, earned the Entomological Society of America's Distinguished Achievement Award in Teaching last November.

Krush, academic undergraduate adviser in the Department of Biochemistry, won the Outstanding New Adviser Award from the National Academic Advising Association (NACADA) last October.

Heng-Moss started her University of Nebraska–Lincoln career in January 2001 after completing her doctorate here. She has contributed to the revamping of the department's teaching program by developing seven undergraduate and graduate courses, and in 2005 provided leadership for the development of a new undergraduate degree program in insect science.

Early on, Heng-Moss overhauled the introductory entomology courses to make them more inquiry-based, more focused

on insects as a model organism for teaching key biological principles, and more interesting to non-majors.

"I wanted to get them excited about science and teach them how we know what we know about science," Heng-Moss said.

She also helped establish undergraduate and graduate classes, including distance and capstone classes and the first advanced scholars course.

Although she received the highest teaching award given by the society, Heng-Moss insists on sharing the department's success with other faculty members.

"It's not an individual effort, it's a team effort," she said.

NACADA since 1983 has honored individuals and institutions for making significant contributions to academic advising.

Krush came to UNL in 2005 with a master's degree from the University of Iowa and 13 years of experience working with students in admissions at three Midwestern colleges. She was one of seven nationwide to receive the prestigious advising award, given to individuals with no more than three years of advising experience.

While she team teaches one course about



Tiffany Heng-Moss, who received the Entomological Society of America's Distinguished Achievement Award in Teaching, shows a giant African millipede.

for students

career opportunities in biochemistry, her main role is advising more than 300 students about fulfilling the requirements of their major.

For biochemistry students planning to attend professional schools after graduation, Krush encourages them to spend time in a setting pertaining to their professional choice.

“Students will often hear me say ‘everything matters,’” said Krush, who urges students to think beyond classes to other activities to steer them in the direction they want to go.

“I really enjoy the relationships I develop with students,” she said, adding that, rather than an adviser, Krush thinks of herself more as a mentor or a partner in assisting students to meet their career goals.

— Lori McGinnis



Joan Krush, recipient of the Outstanding New Adviser Award from the National Academic Advising Association, advises Connor Mahoney, a biochemistry sophomore from Rapid City, S.D.

A brief glimpse



Dustin Jonas

High jumper Dustin Jonas has experienced what few ever will.

The College of Agricultural Sciences and Natural Resources horticulture senior from La Vernia, Texas, competed in the 2008 Olympics in Beijing, then appeared on the David Letterman talk show to talk about it.

Competing with the best high jumpers in the world was an incredible experience, the University of Nebraska–Lincoln student said.

After returning from Beijing, Jonas’ agent called to say Letterman wanted him and two other Olympian jumpers to be on the show. Jonas thought his agent was kidding but “jumped at it” when he found out the offer was legitimate.

While uncertain of his career plans, Jonas has signed a professional contract with NIKE, which will keep him active participating in meets this summer throughout the United States and Europe. He also plans to train for the next Olympics. He also thanks CASNR for helping with his development.

The Olympics “showed me how all cultures can come together and interact.” “It’s incredible that sports can do such a thing ... this whole experience taught me that hard work does pay off. Being in this college has helped me grow up and expect the best from myself, and I will always be grateful to my professors for always expecting the best out of me.”

— Lori McGinnis

New class presents array of views

A College of Agricultural Sciences and Natural Resources Monday noon class is helping students better understand complicated food-related issues.

The one-credit hour class, “Current Topics in Animal Agriculture,” is being offered for the first time this semester.

“A lot of the topics students aren’t exposed to, but may be after they graduate,” said professor Jeffrey Keown.

Guest speakers discuss topics ranging from the economics of corn production to global warming to the Farm Bill to potential animal diseases. One class featured the director of the factory farming campaign of the Humane Society of the United States. He talked about anti-cruelty legislation and other topics.

Students ask questions of the speakers, write reports and read “The Omnivore’s Dilemma,” about American food and its origins.

Christina Heine, animal science senior, grew up on a farm near York that produces hogs, cattle, corn and soybeans. She’s taking the class because it sounded interesting and because it covers multiple topics.

“Any different viewpoint is educational,” Heine said, adding, “that doesn’t mean I always agree with it.”

Keown expects to expand the class in the future. He said the 12 students are learning to discuss topics beyond their areas of immediate expertise, and they find the subject matter interesting. And, he added, attendance is good.

“I’ve not had anyone miss the class,” Keown said.

— Cheryl Alberts

DPH is response to industry call

Think of it as health care professionals – for plants.

The new Doctor of Plant Health (DPH) professional program is gearing up for its first students this fall, said Gary Hein, program director.

The College of Agricultural Sciences and Natural Resources program will educate plant health practitioners rather than researchers, Hein said, which makes it different from other graduate programs in the plant sciences that lead to a discipline-oriented master's or doctorate degree.

DPH students will be broadly educated in areas of agronomy, entomology, horticulture, plant pathology, and soil and weed

sciences. They also will have internships to help round out their education in diagnostics, problem-solving and developing integrated plant management systems.

Students will complete the program in three to four years before advancing to careers in the plant health and management industries, crop consulting, extension education, and some plant-related state and federal agencies.

The University of Nebraska–Lincoln program is the first in the Midwest and only the second of its kind nationally. Nebraska is an excellent location for the program, Hein said, because of the diversification of crops

and growing conditions.

The agricultural industry has been requesting the program for some time, Hein said, and will be providing student scholarships, internship opportunities and, eventually, jobs.

“Agriculture is getting more complex and, as such, agricultural decisions are becoming more expensive,” Hein said. “Graduates of the Doctor of Plant Health program will bring a wider breadth of education and experience to developing and managing optimized plant production systems.”

— Cheryl Alberts

Doctor of Plant Health

