



DEPARTMENT OF
DAIRY SCIENCE
University of Wisconsin-Madison





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Why Wisconsin?



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Top Ranked University





University of Wisconsin-Madison: **In the rankings...**

#**1** Happiest College Students (2013 Unigo College Rankings)

#**3** Total research expenditures among U.S. public universities (2013 NSF)

#**1** Best College Football Town in America (2012 USA Today)

#**4** Top Producers of Fortune 500 CEO's (2013)

#**1** Producing Peace Corp Volunteers (2014)

#**8** Best value in public colleges (2014 Kiplingers), **Top 75** (2014 Princeton Review)

#**11** America's best public colleges (2014 Forbes), #**13** (2014 U.S. News)

#**1** Most popular Business School (2013 U.S. News)

#**25** Among all universities worldwide (2014 Center for World University Rankings)



Admissions are Competitive

Academics Matter Most

- High school rank (84th - 97th percentile*)
- ACT or SAT scores (27-31 ACT Composite*)
- GPA in core academic courses (Math, Science & English); no minimum (3.7-4.0 GPA*) **Target freshmen enrollment = 6,300 students**

*Middle half range for Fall 2012 freshmen

Goal: 75% in-state (WI & MN residents)

- Approximately 66% are WI residents

Campus diversity is considered.

CALS Production Ag Major Admission Initiative

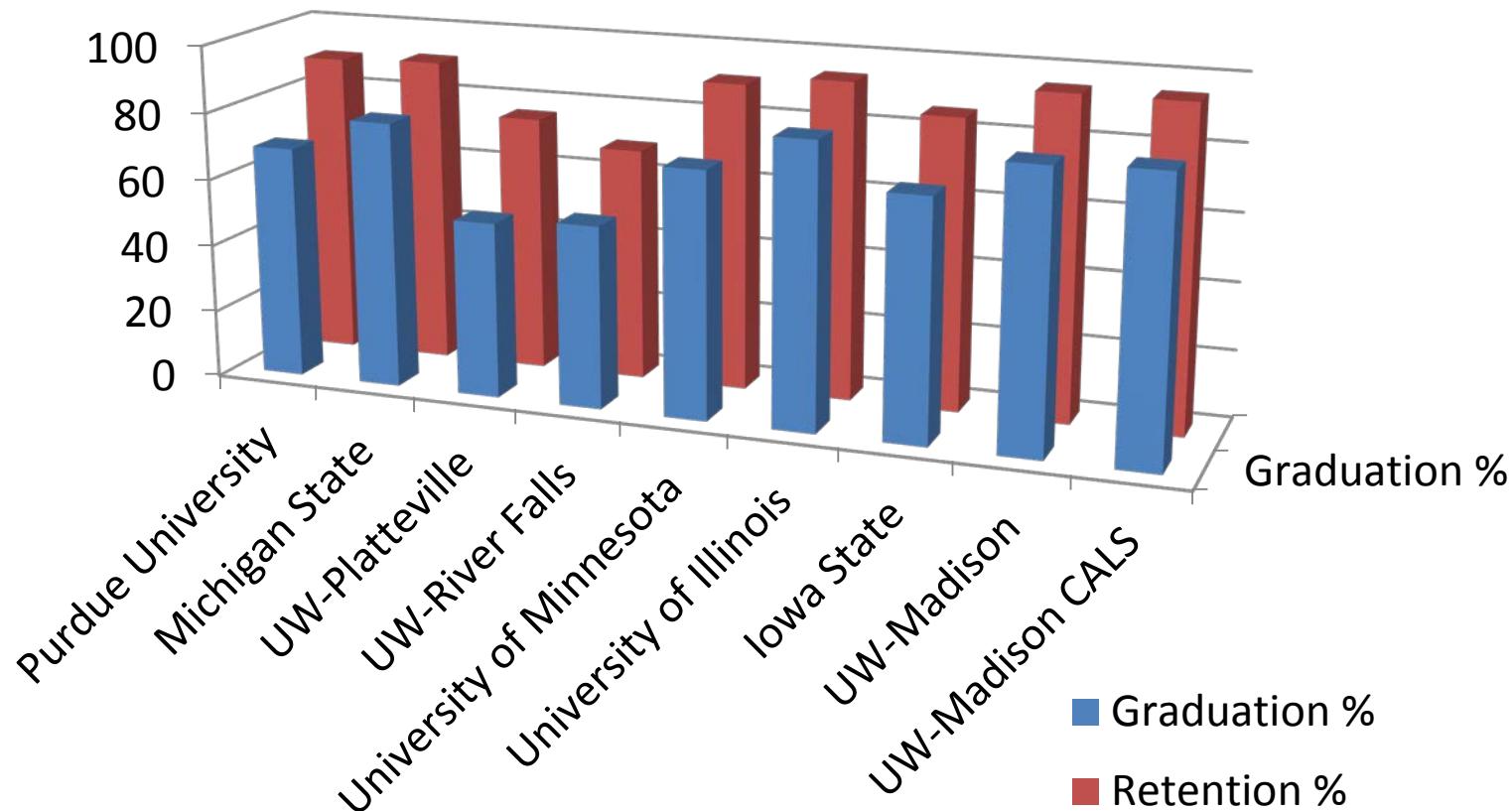
Admission Decisions:

admit, postpone, deny

APPLICATION DEADLINES		
	Deadline	Notification
First Fall Notification	November 3	By the end of January
Second Fall Notification	February 2	By the end of March
Spring Term	October 1	By the end of December



Comparing Retention and Graduation





Tuition, Fees, and Expenses for 2014-2015

	Wisconsin Resident	Minnesota Resident	Out-of-State/ International
Tuition & Fees	\$10,410	\$13,196	\$26,660
Room & Board	\$8,600	\$8,600	\$8,600
Books & Supplies	\$1,200	\$1,200	\$1,200
Total	\$20,210	\$22,996	\$36,460



Office of Student Financial Aid

Grants, loans, and student employment

Search

HOME

PROSPECTIVE UNDERGRADUATES

CURRENT UNDERGRADUATES

GRADUATE AND PROFESSIONAL

PARENTS

*61% of UW-Madison students receive some assistance
36% of enrolled freshmen received grant aid*

All Applicants: Complete the **Free Application for Federal Student Aid (FAFSA)**,

- available online at **www.fafsa.ed.gov** or from the UW Office of Student Financial Services as soon after **January 1** as possible

The University of Wisconsin-Madison is located about a mile away from the State's beautiful capitol.



Scholarships@UW-Madison

HOME SCHOLARSHIPS LIST SCHOLARSHIPS 101 FAQ OTHER RESOURCES CONTACT INFO

Over \$1,000,000 available in CALS

\$140,000 awarded by Dairy Science

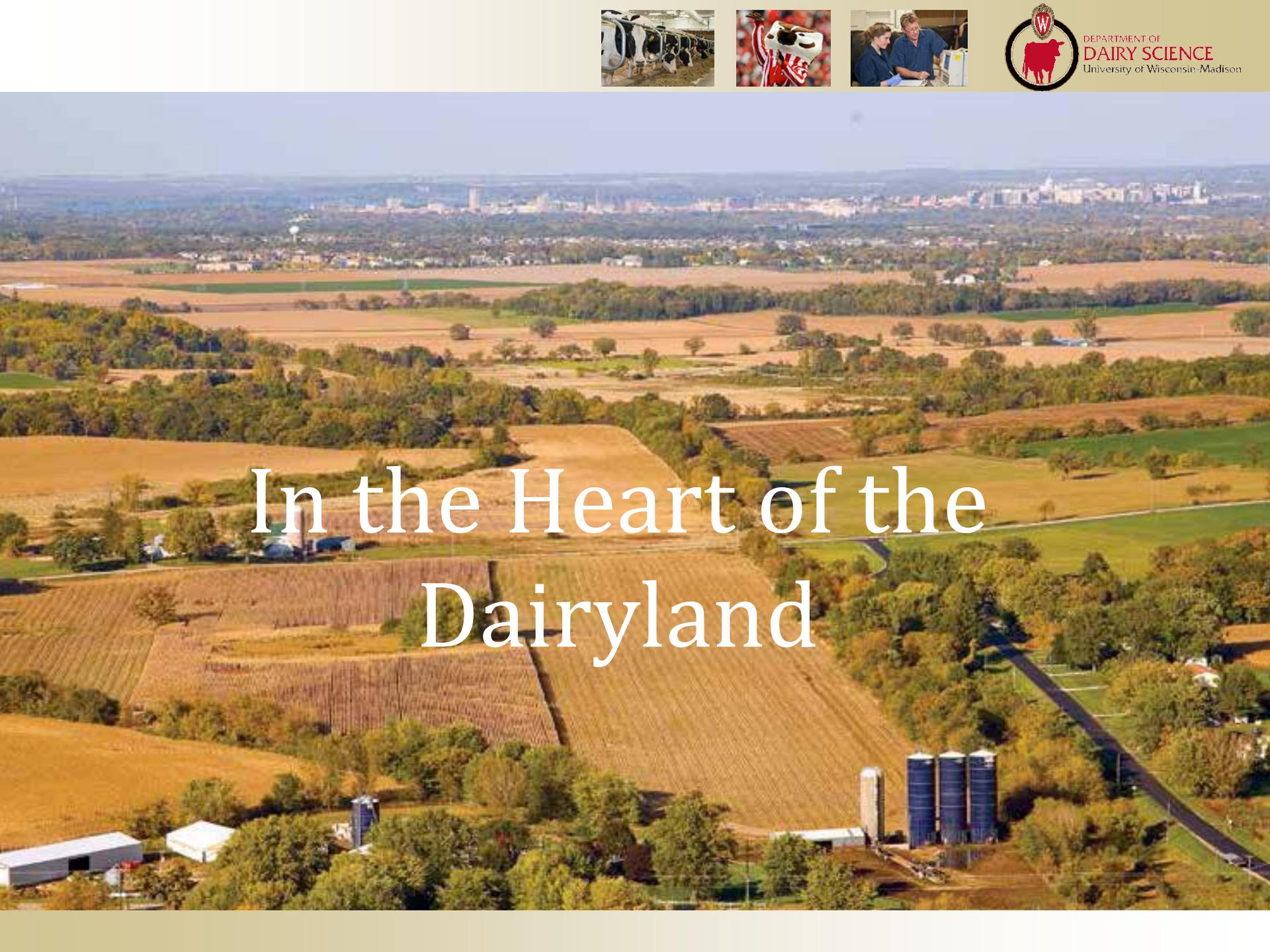
Incoming Dairy Science freshmen who applied for Fall 2014-'15 scholarships ranged from **\$1,000** to **\$10,000**

One common application found at **scholarships.wisc.edu**

APPLICATION DEADLINE:
February 3rd!



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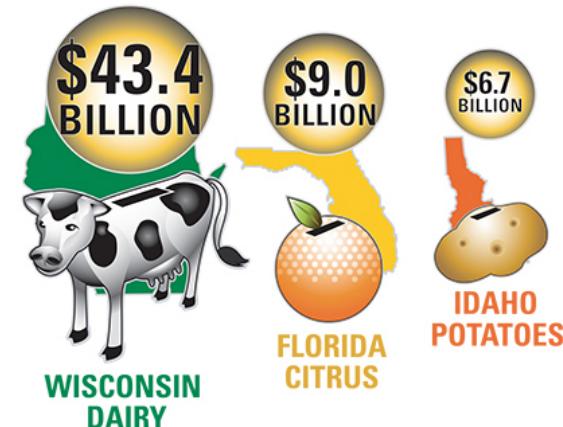
An aerial photograph of a rural landscape in Wisconsin. The foreground shows a mix of yellow and green fields, some with small farm buildings and silos. In the middle ground, there's a dense area of green trees. The background features a large, sprawling city skyline under a clear blue sky.

In the Heart of the
Dairyland



Employment Opportunities

- Wisconsin's dairy industry contributes \$43.4 billion to our economy each year and employs more than 78,900 people
- Each of Wisconsin's 1.27 million dairy cows generates \$34,000 in annual economic activity



Placement of Dairy Science BS grads ~100%

- Median starting salary = \$50,000
- Employment breakdown (roughly):
 - ✓ 30% graduate or professional school
 - ✓ 40% dairy industry (technical support, sales)
 - ✓ 30% farm management/ownership



What Fields Our Students Go Into

**Industry demand for dairy science grads
is greater than supply**

- Veterinary medicine
- Animal nutrition and consulting
- Livestock reproduction
- Dairy Genetics and breed associations
- Dairy Herd Management
- Laboratory research
- Information technology
- Agricultural Extension
- Sales, marketing and international business
- Agricultural Communications



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Dairy Science Lives Here!





Dairy Science Degree Program

Areas of specialization

- Pre-Vet or Research
- Agri-Business
- Dairy Operation Management





Dairy Science Degree Program

Requirements for Dairy Science Majors

All students take these core courses

- ✓ 101 Livestock Production
- ✓ 233 Dairy Herd Management I
- ✓ 234 Dairy Herd Management II
- ✓ 305 Lactation Physiology
- ✓ 311 Comparative Animal Nutrition
- ✓ 313 Animal Feeds and Diet Formulation
- ✓ 361 Introduction to Animal and Veterinary Genetics
- ✓ 362 Veterinary Genetics or 363 Principles of Animal Breeding
- ✓ 373 Animal Physiology
- ✓ 414 Ruminant Nutrition
- ✓ 434 Reproductive Physiology
- ✓ 535 Dairy Farm Management Practicum



Dairy Science Degree Program

**All Dairy Science Majors Select 3 Credits
From This List of Elective Courses**

- ✓ 205 Dairy Cattle Selection
- ✓ 272 Pre-Capstone Seminar
- ✓ 299 Independent Study
- ✓ 320 Animal Health and Disease Management
- ✓ 370 Livestock Production and Health in Agricultural Development
- ✓ 375 Managed Grazing Field Study
- ✓ 375 Ag in Emerging Economies: Dairying in Mexico
- ✓ 375 Mexico Study Tour & Seminar
- ✓ 375 Reproductive Management of Dairy Cattle
- ✓ 375 Intercollegiate Dairy Cattle Judging Competitions
- ✓ 375 Intercollegiate Dairy Challenge Competitions
- ✓ 375 Food Systems Sustainability and Climate Change



Dairy Science Degree Program

Requirements for Dairy Science Major

Student and advisor pick from *list of recommended elective (advanced) courses in:*

- ✓ Biological sciences
- ✓ Business management
- ✓ Communication/marketing
- ✓ Environmental science
- ✓ Food science
- ✓ Foreign languages



- Lameness - 122 incidences
- Mastitis - 227 incidences
- Ketosis/DA - very low incidence
- Reproduction:
 - Retained Placenta - 5.54% - high benchmark
 - Metritis - 12.9% - high
- Milk Fever - 17



Dairy Science Degree Program

- ✓ *Simple for student and advisor*
- ✓ *Tailor a set of courses to each student's needs and interests*
- ✓ *Change specialization without extending time to graduation*
- ✓ *Easy to double-major, even outside of CALS*



High Impact Practices

Capstone Learning

- Work with others
- Incorporate research
- Involve problem solving

Required Internships

- Gain “Real World” experiences
- Learn effective communication
- Network with future employers





High Impact Practices

Faculty Staff Advisors

- Academic and career planning
- Qualified to speak about dairy
- Future reference



International Experiences

- Think about your values & identity
- Gain a global perspective
- Exposure to different dairy systems





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World Class Faculty



Animal Nutrition



Lou Armentano
Professor



Michel Wattiaux
Professor



Randy Shaver
Professor



Dave Combs
Professor



Heather White
Asst Professor

• Research

- Fatty acids
- Feed efficiency

• Instruction

- 311 (animal nutrition)
- 690 (senior seminar)

• Research

- Dairy systems
- GHG emissions

• Instruction

- 375 (dairy Mexico)
- 468 (environment)
- 414 (nutrition)

• Research

- Corn silage
- Starch digestibility
- Nutrition-health interactions

• Extension

- Controlling feed costs
- Forage quality

• Research

- Pasture mgmt
- Fiber digestibility

• Instruction

- 101 (livestock production)
- 535 (capstone)
- FISC

• Research

- Energy and lipid metabolism
- Nutritional demands of transition cows

• Instruction

- 313 (animal nutrition)
- 875 (ruminant nutrition)



Animal Physiology



Milo Wiltbank
Professor



Paul Fricke
Professor



Pam Ruegg
Professor



Laura Hernandez
Asst Professor

• Research

- Follicle growth and ovulation
- Hormonal control of fertility

• Instruction

- 375 (repro)
- 535 (capstone)
- FISC
- 373 (physiology)

• Research

- Early pregnancy detection
- Hormonal synchronization of estrus

• Extension

- Reproductive mgmt programs
- Estrus detection systems

• Research

- Mastitis control and treatment
- Antimicrobial resistance

• Extension

- Milk quality
- Animal health
- Organic dairies

• Research

- Serotonin in the mammary gland
- Calcium mobilization and milk fever

• Instruction

- 305 (lactation)
- Biology 152
- 373 (physiology)



Animal Genetics & Management



Kent Weigel
Professor & Chair



Daniel Gianola
Professor



Victor Cabrera
Asst Professor



Amy Stanton
Asst Professor

• Research

- Genomic selection
- Low-density chips

• Instruction

- 690 (senior sem.)

- FISC

• Extension

- Genomics

- Selection for health and fertility

• Research

- Statistical genetics
- Genomic selection
- Machine learning algorithms

• Instruction

- Graduate level genetics courses

• Research

- Optimization and decision-support systems
- Risk management

• Extension

- Economic decision-making
- Management of feed resources and repro programs

• Research

- Animal health, behavior, and well-being

- Calf management

• Extension

- Animal care and welfare
- Calf rearing



Professional Academic Staff



Jerry Guenther
Research Program
Manager

- **Research**
 - Dairy Reproduction
- **Instruction**
 - FISC dairy reproduction
 - FISC dairy records
 - 375 (reproduction management)



Ted Halbach
Dairy Management
Instructor

- **Instruction**
 - 233 & 234 (dairy herd management)
 - 205 (dairy selection)
 - FISC dairy evaluation)
 - Dairy Challenge
 - Dept. Marketing and Recruiting



Beth Heinze
Dairy Youth
Specialist

- **Extension**
 - Youth Programming



Mike Peters
Herd Manager

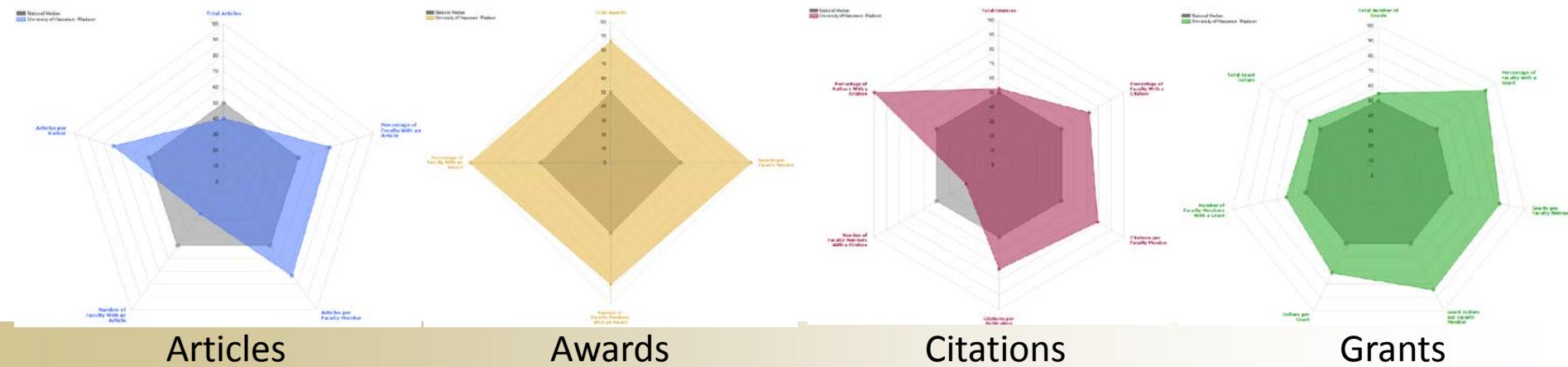
● **Instruction**

- 299 (Independent Study)



Faculty Productivity

- Among 63 animal sciences departments nationwide:
 - #13 in journal articles per faculty member
 - #2 in awards per faculty member
 - #8 in citations per faculty member
 - #12 in grants per faculty member
 - #4 in overall Faculty Scholarly Productivity Index (95th percentile)





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State of the Art Dairy Facilities





Campus Dairy Cattle Center

- Cattle areas (stalls, silos, parlor, arena) remodeled in March 2013
- Human areas (classroom/lab, locker rooms, learning center) to be remodeled in 2015
- Used heavily by CALS, Vet Med, and FISC

Arlington Blaine Dairy

- State-of-the-art research facility for 500 lactating cows

Marshfield Agricultural Research Station

- Unique research facility for 550 growing heifers
- Studying the impact of dairy on soil, air and water quality



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Campus Experience



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Living Community Opportunities

- Residence Halls
- Alpha Gamma Rho
- Association of Women in Agriculture
- Babcock House
- Delta Theta Sigma





Part Time Employment

Over 40 student positions are available in
Dairy Science

- **Dairy Herds**
- **Research Laboratories**
- **Administrative Offices**





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Get Involved!

On-Campus Extracurricular Activities

- Intramural sports
- Attend UW Athletics
- Badger Dairy Club
- Collegiate FFA
- Horticulture Club
- Alpha Gamma Rho
- CALS Student Council
- Dairy Judging Team
- Dairy Challenge Team
- Campus Lectures
- Movies





Comments from our students...

Here is what some recent grads said about their experiences at UW-Madison majoring in Dairy Science:

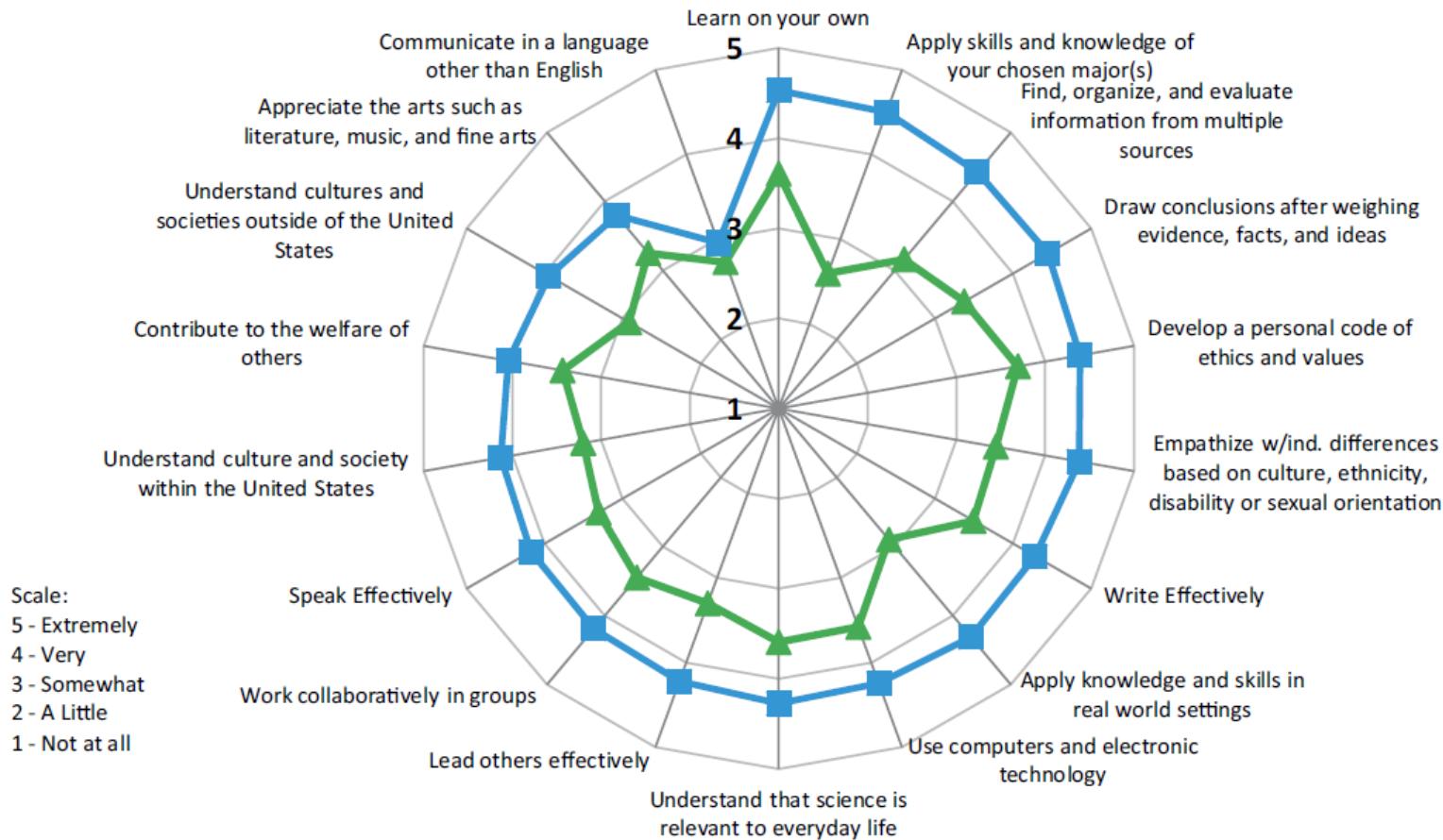
- “I’ve really enjoyed all the opportunities for travel throughout college whether that was through Badger Dairy Club, dairy judging, or for an internship.”
- “My most memorable college experience was being part of the National Dairy Challenge Team that won first place Platinum at Syracuse, New York.”
- “When it came down to a great dairy program and the Big Ten atmosphere, there was no other choice for me.”
- “I wouldn’t think twice about doing it again. It’s been a great experience.”



How You Will Grow...

Perceptions of Learning Gains, 2012-13 Bachelor's Graduates

"How able were/are you to ..." When Entering At Graduation





Visit UW on the web at...

UW-Madison's homepage

<http://www.wisc.edu>

The College of Agricultural and Life Sciences

<http://www.cals.wisc.edu>

UW-Madison Dairy Science

<http://www.wisc.edu/dysci/>





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Mooving Forward.

DAIRY SCIENCE AT WISCONSIN

Questions?