



Bridging Borders

PHOTOS COURTESY MICHEL WATTIAUX EXCEPT WHERE NOTED

Partnerships with our nearest neighbors give CALS students firsthand experience with diversity of both crops and cultures

by Masarah Van Eyck

WHAT KATIE BEHNKE BS'08 MS'10 remembers most from a CALS trip to Mexico is the sight of cows grazing under coconut trees. It was on a farm in the Mexican state of Jalisco, she says, that she really understood the importance of diversifying farming practices.

"They grazed in this area near the ocean that provided food for the cows. The farmers harvested the coconuts, and I think they also used the cows for meat as well as milk," Behnke recalls from the two-week field study, which followed up on material learned in a semester-long seminar called "Agriculture in Emerging Economies: Dairying in Mexico." "They don't have the type of specialization we have here in Wisconsin because there is so much uncertainty in their markets. So if the price of milk is down but coconuts are up, they're protected."

Now, as the University of Wisconsin-Extension agriculture agent for Shawano County, Behnke says she puts to use the things she learned in that course every day—and not just what she learned about diversification as a tool for risk management, the subject of her subsequent in-class presentation. She's come to embrace diverse practices more generally.

**Working and learning alongside
Mexican farmers in their homeland
helps students see the world from
the farmers' perspective.**

"What I learned is that each farm is unique," she says. "So when I go to a farm now, I understand that each one has its particular challenges. I have learned to embrace the differences."

That's what Michel Wattiaux, a CALS professor of dairy science, aims for when he teaches the popular undergraduate course. "My goal is to help Wisconsin dairy students broaden their understanding of the world," says Wattiaux, who recently was honored with a CALS Excellence in International Activities Award. "Learning about Mexico is also a way to learn about the United States, Wisconsin and themselves."

Wattiaux, who grew up on a dairy farm in Belgium, says he saw himself early on in his students, many of whom hail from rural areas of the state. He wanted to make relevant the global effects that influence their lives.

Almost 10 years ago, Wattiaux found a way to do just that. Students were beginning to notice California's growing competitiveness in the dairy industry due in part to inexpensive labor from across the border. Then Hispanic immigrants began to appear in significant numbers on farms here in Wisconsin. Both phenomena prompted Wattiaux to

develop the seminar, which is designed to drive home the interdependencies between the United States and Mexico. Two weeks are devoted to debating issues surrounding immigrant labor.

His approach works. The course, says Stephanie Plaster, a student who went on to serve as Wattiaux's teaching assistant, "makes us see the world from the eyes of a Hispanic worker on a Wisconsin farm, or from the perspective of a smallholder who lives below the poverty line in the highlands of Mexico."

Katie Behnke says that kind of content will help in her work with Mexican immigrants. "It makes communication easier because you understand what's behind the thought process and you understand their previous experiences," she says. "Just because they do it differently in Mexico doesn't mean they do it wrong. We're not better farmers, we're just different farmers."

Of course, immigration is only part of the picture. Looking at emerging economies like Mexico's, Wattiaux says, helps students understand how Wisconsin's agricultural industry is tied to not only the national but also the global industry.

Accordingly, the course includes

study of policy papers, current affairs and trade agreements to underline the global nature of agriculture. Beginning with a worldwide overview of food production, livestock agriculture and trade, the course then focuses on U.S.-Mexico agricultural relations and the Mexican dairy industry.

"Mexico is the largest dairy export market for the U.S., and I'm trying to be respectful of that," Wattiaux says. "If students want to go into that business, then I want them to be as informed as possible."

Leaving economic competition aside, Wattiaux says, "If you have a bachelor's degree in dairy sciences from the University of Wisconsin, don't you think you should know a little about how milk is produced and consumed in other countries? This class is about diversity. It's about thinking from different perspectives."

By the time students leave for the optional field study, they also have an understanding of the history and cultures of the people of central Mexico. "I touch on some stuff that doesn't have anything to do with science but everything to do with everyday life," Wattiaux says.

For Erik Dolson, an agricultural and applied economics major who took the course last semester, the opportunity to learn about the entire spectrum of the industry is what drew him to the course.

"I was excited for the opportunity to get such a close look at issues like livestock and agricultural production that are so pertinent to another country and its development," he says. "Plus I love learning about other cultures and speaking other languages."

Arguably, it's the two weeks visiting with Mexican universities and smallholder and subsistence farmers in central Mexico that has the biggest impact on the students, some of whom have never been on an airplane, much less applied



Students helped farmers cut and load grass.



PHOTO BY BRYCE RICHTER

The next best thing to travel:
In Madison, Michel Wattiaux uses a two-way video feed with students and colleagues in Mexico to foster a closer connection.

for a passport or visited a travel nurse.

Accompanied by colleagues from the University of Guadalajara, students also visit a small-scale cheesemaking factory in Aculco, a family-owned diversified poultry and dairy operation with its own

industrial scale feed mill in San Juan de los Lagos, and a cooperative of small and mid-size dairy farmers in Acatic.

But some of the best experiences come from the one-on-one interactions with farmers who welcome them onto

their land. As dairy science student Will Springer wrote after last year's field study, the best part of the trip "was when we would visit with the farmers either over lunch or still in the field and they would be beaming with pride ... Their way of life may not be more modern than ours, but it is not less in any way."

As Wattiaux puts it, once they see a farmer plowing land with a horse, students quickly come to appreciate that individual needs breed necessary differences.

"It's one thing to see it on the Discovery Channel. It's another thing to see it for yourself," he says. 



Our man in Mexico: Kevin Pixley (second from left) with graduate students.

PHOTO COURTESY KEVIN PIXLEY

"I can find climates that are representative of much of the world all within a half day's drive," says Kevin Pixley, who directs the genetic resources program at Mexico's International Maize and Wheat Improvement Center (CIMMYT) and just completed several semesters as a professor of agronomy at CALS. During that period he retained a half-time appointment at CIMMYT, and he plans to continue cultivating a vibrant corn connection with CALS.

"CIMMYT scientists do not conduct basic research. But basic research, and the cutting-edge knowledge of basic researchers—for example in the areas of genomics, bio-informatics and nutrition—are instrumental to enable the application of recent scientific advances to benefit poor farmers," says Pixley. "For UW scientists, participating in research projects with CIMMYT is an exciting opportunity to see their research reach farmers beyond Wisconsin and the United States, and to expand the impacts of their work and of UW."

It was at CIMMYT that Pixley first met fellow corn breeder Bill Tracy, an agronomy professor and now CALS' interim dean, who brought students to visit the CIMMYT headquarters in Texcoco.

Through Tracy, Pixley and other researchers, CALS' corn work with Mexico continues to grow. And undergraduates get a taste of it. In August, for example, Tracy and Pixley, along with CALS nutritional science professor Sherry Tanumihardjo and agronomy professor Shawn Kaeppler, plan to once again hold a class for undergrads in partnership with CIMMYT. "Linking Agriculture and Nutrition in Mexico" will include a visit to the National Institute of Health in Mexico City and count toward a newly offered undergraduate certificate in global health.

Corn Connection

It's no surprise that Mexico is a mecca for corn breeders. Not only is Mexico the center of the plant's origin; the region also boasts the greatest natural diversity of maize grown on the planet, including wild relatives of maize. Moreover, the country is home to a wide range of tropical growing climates, from sea level to mid and high altitude.