

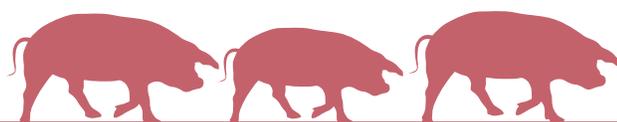


10-1-2009

Shaping the Future of Food



f SHAPING THE FUTURE OF food



Pigs have always been a part of Tom Parsons's life. Long before the Penn Vet associate professor chose his calling, he learned the finer points of swine husbandry from his father while growing up on the family farm that he jokingly calls "possibly the only pig farm in Massachusetts."

Decades later, these lessons have come full circle as **Parsons, V'86, GR'89**, helps Penn Vet lead the way in introducing new standards and practices to the swine industry, while instilling in students a deeper appreciation for animal welfare.

This story began in 2001 when Penn Vet became the first veterinary school to create a physical setting for exploring swine welfare. Today, its Swine Teaching and Research Unit at the New Bolton Center – known as the Swine Center – logs more than 1,500 student hours each year and makes an immediate impact by demonstrating economically viable models for farmers intent on raising pigs in animal-friendly environments.

The best is yet to come. Soon Penn's Swine Center will undergo a \$1.15 million renovation and expansion project that will invest in new technologies and create new facilities, including a 1,000-square-foot classroom and web resource unit available to the public. The American Society for the Prevention of Cruelty to Animals (ASPCA), the project's lead funder with a \$600,000 challenge grant, sees a unique opportunity timed to make the greatest possible impact on the American swine industry. The challenge grant requires matching gifts of \$100,000. "The ASPCA is thrilled to be a part of this exciting and important renovation," said Ed Sayres, president and CEO of the ASPCA. "With its new resources,

Penn's Swine Center will be able to continue making significant and innovative contributions to animal welfare."

The Center, scheduled to open in January 2010, will also incorporate green design, will become a living laboratory that can accommodate more students and more animals, and most importantly, show a wider array of alternative practices.

Penn Vet understands how critical it is to put progressive methods within the reach of American farmers, who face tremendous pressures: producing affordable food from a fixed (or shrinking) farm land base for an ever-increasing world population.

FOCUSING ON PREGNANT SOWS

Even before ground was broken this fall for the new facilities, developing novel husbandry practices for the care of mother sows has been at the center of the Swine Center's ongoing development.

The Swine Center initially concentrated on an alternative to a traditional husbandry system known as the gestation crate. This form of individual animal housing is receiving increased public scrutiny due to the limited mobility of animals reared in it. The "Penn" gestation system allows groups of pregnant sows to be housed in the pig equivalent of a free-stall barn. Individual sows are uniquely identified and their prenatal nutrition controlled with eartags, each containing a microchip.

At last count, 22 farms, home to nearly 35,000 sows, have adopted the model developed at the Swine Center for managing gestating sows in pens. Most of these farms are located in Pennsylvania, but they can also be found in Indiana, Iowa, Minnesota, Missouri and Texas.

NEXT UP: NURSING SOWS

While Penn Vet moves forward with research on gestating sows, the novel focus of the newly renovated Swine Center is the nursing sow. The traditional farrowing crate, where mother sows give birth and also nurse their piglets for several weeks, is becoming a topic of increasing concern for animal advocates.

The major goal for the new facility is to create a viable animal friendly alternative to the farrowing crate, while still providing adequate protection for the piglets. Neonatal piglets, like many newborns, are not athletic, while recently birthed mother sows can be very clumsy. With time, this problem diminishes as the piglets' coordination improves and the mother sows learn to move more carefully.

Traditional farrowing crates address this risk by confining the movements of the awkward mother sows.

The Swine Center's new farrowing facility will revisit this approach. It will be crate-free and rely on specialized areas for the piglets to seek safety from the sow. These farrowing pens require significantly more square footage to implement and provide both bedded laying areas and outdoor access for the sows.

"To our knowledge, such a farrowing facility has never been built in this country," says Parsons. "We are in the process of understanding how these novel approaches translate to U.S. farming methods."

EDUCATION FIRST

Alongside the debate in American agriculture about changing with the times, Penn Vet sees a vital educational opportunity: How can the Vet School educate students for a changing agricultural environment?

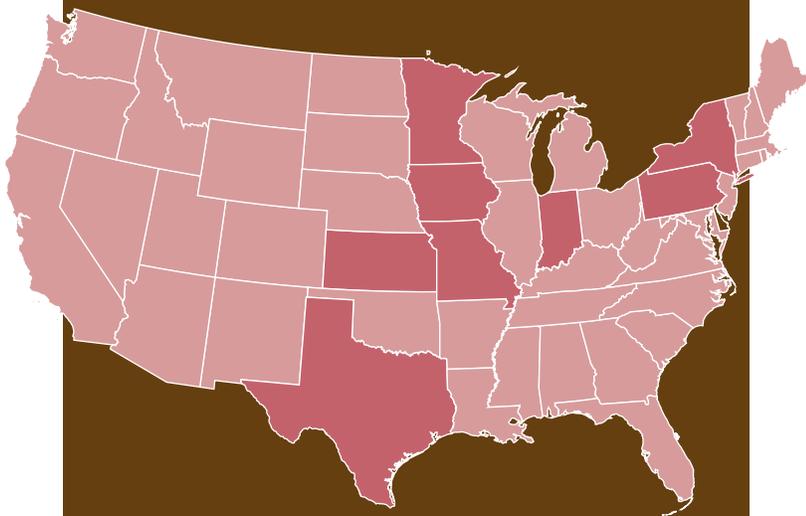
"Penn Vet community is committed to having a prominent role when it comes to addressing society's burgeoning concerns about modern livestock rearing," explains Parsons. "It is important that companion animal practitioners also are well versed on these issues as they interface daily with some of the most concerned segments of our society."

Philanthropic support, too, is beginning to acknowledge the increasing importance of these animal welfare concerns.

Rachel Toaff-Rosenstein, V'09, one of Parsons's students, will be using her \$100,000 Penn Vet Inspiration Award, sponsored by The Vernon and Shirley Hill Foundation, to pursue post-graduate studies in farm animal welfare.

Parsons knows how important it is to stay out front. "Penn Vet's job is to continue looking down the road. The next steps – outdoor access, deep-hay bedding and no farrowing crates – will be a part of the new practices here because of the ASPCA's investment. Now we have to transform these future consumer expectations into a viable alternative for tomorrow's farmer."

To help meet the ASPCA challenge contact Kate Judge at 215-898-1482 or judge@vet.upenn.edu.



State	# Farms	# Sows
Indiana	1	5,000
Iowa	3	3,800
Kansas	1	200
Minnesota	1	5,000
Missouri	2	1,600
New York	1	100
Pennsylvania	10	11,000
Texas	3	7,500
Total	22 farms	34,200 sows

Swine Teaching and Research Unit

Planned herd size:

> 200 sows

Current teaching load:

> 1,500 student contact hours logged per year

Classroom space in barn:

> 1,000 square feet

New facility space:

> Addition of 10,000 square feet

New equipment:

- > Swiss designed farrowing pens
- > Latest electronic sow feeder from Schauer Company in Austria
- > Free-access feeding stalls

New welfare features:

- > Farrowing pens
- > Outdoor access
- > Deep-bedded laying areas

Feeding attributes:

- > Individual feeding of group housed sow via micro-chipped eartags
- > On-site mix mill to ensure flexibility and quality control of feed

Additional features:

- > Computerized estrus detection station
- > Farrow-to-finish capabilities
- > Closed herd with internal replacement of breeding females

Green-energy design:

- > Photovoltaic solar panels, specially designed to take advantage of swine barns' traditional south-facing roofs

