

# Pig Pens Go High Tech

SCHAUMBURG, Ill. — Say goodbye to the old-fashioned pig pen. Increasing numbers of swine today are being raised in luxury pig penthouses.

Animal preference studies and advances in high technology have ushered in a new age of farming — creating an environment that meticulously provides for livestock needs, said Dr. Gregg BeVier, vice president of Premium Standard Farms, one of the country's largest hog producers.

Premium Standard, based in Princeton, Mo., is the quintessential example of high-tech farming. More than 8,000 monitors are wired throughout complex. Genetics, nutrition and environment are carefully controlled and adjusted to provide optimal conditions for the growing pigs.

"In many ways, big farms like ours improve the welfare of the animals," BeVier said. "We have the wherewithal to provide ideal conditions."

BeVier, a veterinarian with a master's degree in business administration, is one of nine farm animal welfare specialists from around the world who spoke at the American Veterinary Medical Association's fourth annual Animal Welfare Forum on November 5 at the Hyatt Regency O'Hare in Rosemont, Illinois.

In addition to state-of-the-art environment, Premium Standard Farms is also taking advantage of the latest management practices.

Rather than simply raising the hogs and selling them, BeVier's managers carefully control each stage of production; all livestock is conceived, raised, slaughtered and packaged by Premium Standard. Since the company can literally track one hog through the system, it has total control over quality, Dr. BeVier said.

This practice, commonly called integrated farming, is about five years old, though the idea has been bandied about for more than two decades. When Premium Standard Farms went into business four years ago, executives

were committed to the concept. Today, they credit the process with the company's exponential growth.

Dr. BeVier admits, however that start-up costs are heavy, and only the biggest farms can afford to implement the idea. Still, he believes integrated farming is the wave of the future. Today, some 10 percent of the meat sold in the United States is raised on such farms, Dr. BeVier says. Over the next decade, he expects this figure will balloon to 30 percent.

"It's turning into a big corporate business," he said, adding that increased demand for integrated farming will be inevitable as consumers and export markets become more particular about how their meat is grown and slaughtered.

In turn, companies such as Premium Standard Farms must be constantly on the lookout for the best and most efficient ways to raise and handle animals. Many traditional practices — developed over the years on small, family-owned farms — have not been viable for large producers, Dr. BeVier said.

"The average farm in the United States has 50 sows. Here in the near future, we will have 80,000 sows," BeVier said. "Animal housing and welfare is a key issue because dealing with 50 sows and dealing with 80,000 sows is completely different."

Because Premium Standard Farms is so large, maintaining and improving the whole population is crucial. To do this, the pigs are housed in conditions vastly different from the stereotypical pig sty.

Instead of wallowing in mud, corporate swine are housed in spacious, well-ventilated barns. Their floors are flushed several times a day by an automatic cleaning system. Temperatures inside do not fluctuate — the buildings' environmental systems are on the same kind of controls that regulate office complexes and skyscrapers. Food, medication, and water is tightly monitored. By carefully

controlling and measuring these kinds of variables, farm managers can continue to improve conditions for the pigs, BeVier said.

"I can tell you when our animals choose to drink water," BeVier said.

"Is that important? I might not know today, but as we change feeds, as the temperature changes, as we change facility types — any of this might alter the drinking pattern of the animals. We need to know that.

"The better we document what we do and how the animals respond, the more we're going to know."

BeVier acknowledges that big farms like Premium Standards have been criticized by some who think that animals are happier in more natural conditions like the traditional family farm.

He notes, however, that there is no way of knowing if animal is indeed "happy." Instead, Premium Standard relies on behavioral studies that test preferences in swine. The results of those tests are incorporated into the farm's day-to-day management practices, he said.

"Air temperature is an example," BeVier said. "Larger animals like it a little cooler."

"We actually have a growth curve — as the animals grow, the

building gets cooler for them. It is all programmed in and computer operated. That's an advantage you get from high technology."

But not all improvements require vast computer systems and blinking monitors. Right now, for example, Dr. BeVier is thinking about building an indoor playground for the farm's oldest hogs.

While the fences, ramps and bridges might reduce boredom amongst the pigs, the real reason for installing them would be to reduce stress, Dr. BeVier said.

"We're trying to find unique ways to transport the animals," he

said.

"You just can't say, Hey guys, get into a single file and go. We need to find ways to load and unload animals so they don't feel like they're being loaded and unloaded."

The playground's "toys" would be designed to look and feel like the farm's loading ramps. "If the pigs are used to walking up and down these things, loading the animals will be no problem," BeVier said.

"We try to alleviate animal stress," he said. "If we find things that work, we want to do it that way."

## Americans May Import Ag

UNIVERSITY PARK (Centre Co.) — George E. Seidel Jr., a 1993 Penn State Alumni Fellow, recently presented several talks for students of agriculture and fellow animal scientists at the University Park Campus.

According to Seidel, a professor of reproductive biology at Colorado State University, it is likely that Americans will be using products of animal origin at

the same level in the year 2025 as now.

He said that if societal constraints limit our capacity to produce animals, "we'll buy them from other countries, much as we buy our televisions and automobiles elsewhere today."

Seidel was elected a member of the National Academy of Sciences last year, the pinnacle of scientific achievement.



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