By Suzanne Deutsch

Unique Design Gives Sow Freedom to Move

Increasing pressure from animal welfare groups to improve living conditions of sows and pigs motivated veterinarian Leszek Mardarowicz, Lublina, Poland, to develop a new farrowing pen design.

Mardarowicz's "freedam" or "walking barrier" farrowing pen could be at the forefront of new market-driven welfare standards. The design improves a sow's opportunity to move and turn around.

"Farrowing crates do not provide the proper conditions for the farrowing act and do not respect a sow's basic behavioral needs," Mardarowicz says. "They don't permit a sow to move freely or choose where to defecate. The freedam pen offers easy access to the sow, allows a technician to safely assist with delivery and the sow to interact with her piglets, and lets her choose where to defecate."

Polish swine veterinarian and behavioral specialist Leszek Mardarowicz designed the "freedam farrowing pen" as an alternative to crates.

Design Principles

The freedam farrowing pen concept is simple and features five railings, both fixed and adjustable. The pen is split into two sections, with approximately two-thirds of the pen space allocated to the sow and the other third reserved for the piglets. Total pen dimensions usually range between 7.2-7.9 ft. long and 5.9-6.6 ft. wide.

As shown in Figure 1, the sow is able to walk freely around a barrier (1) anchored solidly in the middle of her portion of the pen. Unique to the freedam pen design are the telescopic barriers (2), which divide the sow space and the litter's sleeping and eating space, which is equipped with a heat source. The telescopic feature allows the pen to be adjusted to sows of various sizes. The design also allows the entry gate (3) to be centralized in a common alleyway in front of the sow's lying area, which also facilitates assistance at farrowing or treatment by a veterinarian.

The goal is for the sow to walk in only one direction. She can move freely, build a nest (if straw is provided) in the concrete, insulated floor area in the center of the pen. Sows generally defecate and urinate in the area along the pen divider panel, opposite the trough. A sow straddles a pipe (4) mounted a few inches off the floor to prevent her from lying in the eating/defecating area, which can be solid or slotted.

Aisles at both ends of the pen insure that feeding and manure removal can be kept separate.

However, the freedam pens can be installed with only one aisle, which requires about the same square footage as conventional farrowing

The freedam farrowing pen offers the protection of a crate and the freedom of a pen.

crate installations. Mardarowicz recommends using a combination of either a 50/50 or 60/40 ratio of concrete flooring to slats in the pens, with the lying area solid concrete.

"When a sow or gilt is lying on her belly, her teats can pass through the slats. When she gets up, she may well injure herself by cutting a teat on an iron (or concrete) slats' sharp edges. Infection can set in and lead to fewer teats for piglets to nurse on," he says.

Mardarowicz, also an expert in animal behavior, started his career in 1974 as an instructor at the Lublin Academy of Agriculture. He developed his first farrowing pen in the early '80s. His electronic sow feeding system, introduced in the early '90s in Poland and the Ukraine, is now used throughout Europe. His first prototype of the "freedam farrowing pen" was built in 1996 after years of wanting to come up with an alternative to crates.

Producer Experiences

Word of mouth led Tadeusz Ewertowski, a hog farmer in Sarbia, a small village in Poland's Wielkopolska region, to buy 24 pens when he built a brand-new facility two years ago. "The pens are more expensive," admits Ewertowski, "but they are worth it. Farrowing time is shorter; on average, one hour. Preweaning mortality is approximately one (pig) per litter." Ewertowski averages 14 live piglets/sow farrowed and averages 12.5 at weaning.

"I like animals and find that the sows are happier in a freedam pen. Besides, the pens are easy to clean," he adds.

Garstka Kazimierz, a fifth-generation farmer, installed two dozen freedam pens in his new, 600,000 PLN (US$177,000) facility. Kazimierz says the pens are quite an improvement. In his former piggery, he farrowed sows in crates on straw and has found that sow handling is much easier with the freedam pens. "It is easier to keep the sows clean using these pens on concrete and slats," says Kazimierz. "The system works."

The freedam farrowing pen retails for 625 PLN (US$185). The price includes all metal fencing, but excludes supports or plastic sideboards. Design adjustments are underway to offer the farrowing pen on a fully slotted floor.

Mardarowicz's pen has been patent protected since 2004. To date, about 1,500 units have been sold in Poland, the Ukraine and Lithuania. At present, there is no American distributor for the pens. Further information can be obtained by visiting Mardarowicz's website: *www.mardar.pl.* ❐

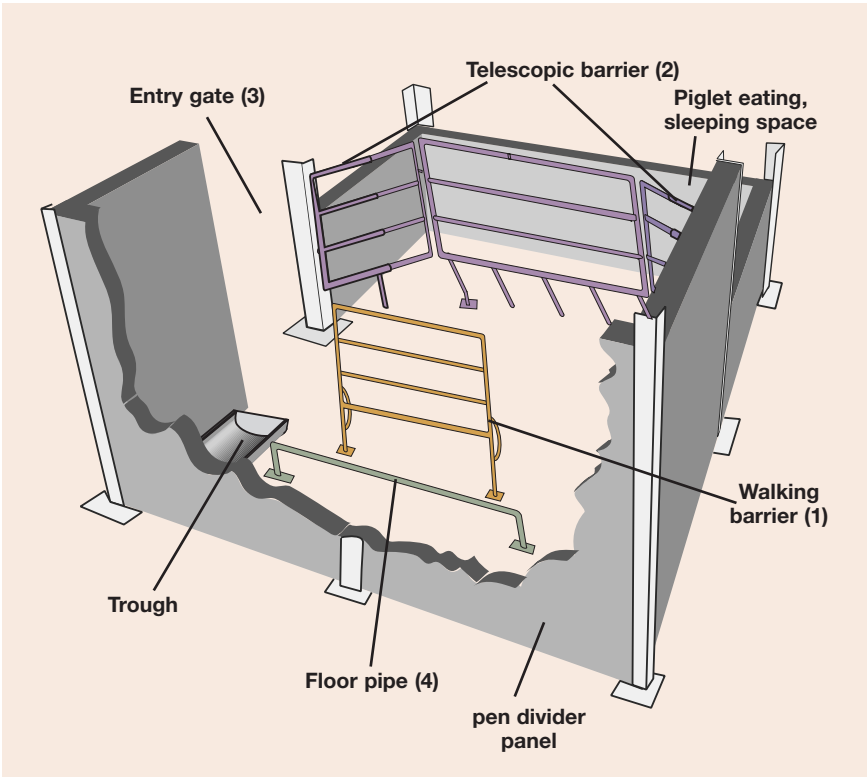

Figure 1. Details of the freedam farrowing pen.