Livestock Industry Facilities and Environment: Swine Breeding Systems—the Levis System

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The Levis System was developed by Dr. Don Levis at the University of Nebraska. The basic concept is housing of sows and boars in separate rooms. To heat check, sows are walked into the boar room. Because they have not been exposed to boars on a continuous basis, sows in standing estrus will “lock up” immediately because they are more sensitive to boar stimuli. Pens or stalls may be used for gestation housing.

Advantages of the system include:

- Accurate estrous detection;
- Separate boar housing makes enhanced heat stress reduction methods more practical;
- Minimal breeding pen area;
- Easy conversion to artificial insemination;
- Circular animal movement.

Disadvantages of the system include:

- A great deal of animal movement occurs during heat checking;
- Both the sow and boars must be moved to the breeding pen;
- Bred animals must be held in the boar area until all animals are checked, otherwise they carry boar odor back to the female area and may cause estrous females to “lock up” before going into the boar room;
- Animals may need to be moved during the implantation period.

Further information:

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Figure 1 A version of the Levis System.

Figure 2 A version of the Levis System.