

Bedding Management

IPIC NPP230 2007

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Bedding is a critical component of most niche pork production systems. Pig comfort is increased with well-managed bedding packs. Bedding allows pigs to alter the temperature they experience. Areas within a bedding pack will begin to compost and can become very warm, a great advantage in winter. Alternatively, other spots remain cooler and spreading out into those areas allows pigs to cool themselves. Bedding provides a combination of potential benefits to sows and growing pigs such as nutrition, thermal regulation, physical comfort, and environmental enrichment.

Managing bedded systems optimally requires experience, but the following guidelines are useful starting points:

- ◆ Clean bedding should always be used, bedding that is dusty, like soybean stalks, may contribute to respiratory problems.
- ◆ Enough bedding should be used so that the surface underneath the bedding pack remains dry.
- ◆ Additional bedding should be added as dunging areas form to prevent sloppy areas from developing.
- ◆ Pigs with bedding should remain clean. Dirty-looking pigs suggest more bedding is needed.
- ◆ Excess moisture can leach nutrients out of the bedding pack.
- ◆ Bedding should be excluded from areas designated for feeding and watering.
- ◆ Bedding should be removed from pens after each group of pigs.
- ◆ Sow gestation facilities should be completely cleaned and re-bedded regularly.

- ◆ Bedding use during the summer is approximately one-third less than during winter.
- ◆ The mixture of bedding and manure may accumulate to a depth of three to four feet during the winter in some areas of growing pig barns.

Cornstalks and small grain straw is the most common type of bedding used, although other materials are also acceptable. Table 1 provides estimates of bedding use by different types of pigs. Sawdust, woodchips, shredded paper, etc. can be used as bedding with the critical considerations being absorbency and the material's structure when wet. For example, shredded paper is very absorbent, but tends to become a solid mat when wet. This solid mat can be difficult to remove. Alternatively, wood chips maintain their structure after wetting but are less absorbent than other materials. Mixing different bedding materials can help overcome some of these problems.

Successfully keeping sows with litters of pigs in bedded systems requires attention to detail. The bedding must remain dry to avoid chilling the pigs. Also, the use of heat sources such as heat lamps can be a fire hazard in systems that use bedding, particularly straw or cornstalks. While external heat sources are typically necessary for winter farrowing and for the very young pig, caution should be practiced. Every effort should be made to keep the supplemental heat away from the sows to minimize fire risk. Wood chips or shavings are less flammable than loose straw and are used by some producers during farrowing. Wood chips may create a bio-deck, with urine and feces collecting in the lower layer

of material while the upper layer remains dry and comfortable. Saw dust or very fine wood shavings are very absorbent and may

cause the newborn pig to bleed excessively through the naval cord.

Table 1. Estimated amount of bedding needed for various types of pigs¹.

Type of Pig	Type of Bedding	Average amount of yearly bedding
Sow and Litter Birth to 5 week weaning	Shredded corn stalks	200 lb per sow
	Oat straw	180 lb per sow
	Barley straw	240 lb per sow
	Wood chips*	185 lb per sow
	Shredded paper	250 lb per sow
Growing pigs Wean to market	Shredded corn stalks	200 lb per pig
	Oat straw	180 lb per pig
	Barley straw	240 lb per pig
	Hardwood sawdust*	335 lb per pig
	Pine sawdust*	200 lb per pig
Gestating sows	Corn stalks	2500 lb per sow space
	Oat straw	2250 lb per sow space
	Barley straw	3000 lb per sow space

¹Based on AED 41, AED 44, and ASR 2153.

*Wood products should be used with caution. Wood chips and sawdust exposed to bird droppings need to go through a heat cycle to avoid transmission of avian tuberculosis to pigs.

Additional Resources

Brumm, Michael, C., Jay D. Harmon, Mark S. Honeyman, James B. Kliebenstein, Steven M. Lonergan, Rebecca Morrison, and Tom Richard. 2004. Hoop Barns for Grow-Finish Swine. Agricultural Engineers Digest, AED-41. Midwest Plan Service. Ames, IA.

Voyles, Reggie and Mark S. Honeyman. 2006. Absorbency of alternative livestock bedding sources. A.S. Leaflet R2153. Iowa State University Animal Industry Report 2006. Iowa State University Extension, Ames.

Harmon, Jay D., Mark S. Honeyman, James B. Kliebenstein, Tom Richard, and Joseph M. Zulovich. 2004. Hoop Barns for Gestating Swine. Agricultural Engineers Digest, AED-44. Midwest Plan Service. Ames, IA.