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Composting Swine Mortalities at Allee Farm: Lessons Learned

Abstract

It is common to lose 10 to 15% of the newborn pigs during pasture farrowing season. Common losses during growing and finishing range from 2% to 4%. Our on-farm demonstration utilized an abandoned swine building to compost the year;s losses.

Disciplines

Agricultural Science | Agriculture

Composting Swine Mortalities at Allee Farm: Lessons Learned

Kris Kohl, field specialist
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Background. It is common to lose 10 to 15% of the newborn pigs during pasture farrowing season. Common losses during growing and finishing range from 2% to 4%. Our on-farm demonstration utilized an abandoned swine building to compost the year's losses.

Equipment used. Plastic barrel, 30 or 55 gallon; used wire decks as divide walls; Composting thermometer.

Barrel preparation. The inside of the lid was cut out leaving about three inches around the edge to allow easy attachment of the plywood lid. Holes (3/8" to 1/2") were drilled in the bottom 1/3 of the barrel to allow air movement every two to three inches.

Divide walls. Used wire decks were used to construct a divide wall to form bins that were two feet wider than the skid-steer loader to allow some maneuverability. This worked well for all but one large sow that had to be angled to fit.

Co-compost material. This material is the carbon source for the compost. It should be bulky, dry, and absorbent. Turkey litter from a local turkey farm was used and worked very well. It was low cost, high carbon, and dry.

Procedure. A 12 to 18 inch base of litter was placed on the bottom to absorb any leachate that may come through. The mortalities were layered one deep and covered with 6 inches of litter. Animals were added until the bins were full. When the temperature fell below 120° the pile was turned. Over 260 pigs were composted including one 500 lb sow and about 6 pigs over 150 lb.

Plastic Barrel. The barrel was loaded similarly to the bins, with small pigs less than 10 lb. It was turned after 20 days. This works well for small pigs.

Problems encountered

- Cold temperatures – A new pile was started in February with a frozen pig. The litter insulated the pig and the pile temperature remained below 60 degrees until June when it was added to the hot pile. The pig was desiccated, but no foul odor was present.
- Several of the large bones of the large sow were still present after the final compost. This is legal to apply to the field though most of the bones were brittle and could be crushed with little effort.

Future plans

- Continue composting using corn stalks as the co-compost material.
- Compost the cattle that may be lost on the farm.