



Section 2.2

Barn Sanitation

REFERENCED IN THIS SECTION:

Number/ Identifier	Name	Importance
	STANDARD OPERATING PROCEDURES	
2.2.1	Sanitation	Mandatory
2.2.2	Alternative Cleaning	
	RECORDS	
R-2	Incident Report	Mandatory
R-4	Monitoring Record	
R-F	Barn Sanitation and Cleaning Record	Highly recommended
	FACT SHEETS	
F-1	Barn Cleaning and Disinfection	
F-2	Lime Application	

SECTION 2.2

BARN SANITATION

REQUIREMENTS

1. **A Sanitation SOP (SOP 2.2.1)** and/or an **Alternative Cleaning SOP (SOP 2.2.2)** must be adequately implemented in each area of the barn(s).
 - a. A **Sanitation SOP (SOP 2.2.1)** must include:
 - i. at least one cleaning measure,
 - ii. at least one washing measure, and
 - iii. at least one disinfection measure.

If your barn sanitation program does not include cleaning, washing and disinfecting, complete the Alternative Cleaning SOP (SOP 2.2.2).
 - b. An **Alternative cleaning SOP (SOP 2.2.2)** must include:
 - i. at least one cleaning measure, and
 - ii. at least one disinfection measure.
2. **A Sanitation SOP (SOP 2.2.1)** and/or **Alternative cleaning SOP (SOP 2.2.2)** must be adequately implemented at least once every 12 months in each area of the barn(s).
3. Feeding areas, feed storage areas and other areas that animals can access (including alleyways) must be free from chemical products (e.g., pesticides and disinfectants).
4. Measures to minimize contamination of the feeding areas by urine or feces must be in place.

For your convenience, templates for the SOPs listed above have been developed for you to use.

RATIONALE

- a. Sanitation and alternative cleaning SOPs are designed to minimize the risk of spreading food-borne pathogens that can contaminate pork.
- b. Good sanitation practices help to reduce disease and the need for antimicrobial agents, such as antibiotics.
- c. Infectious agents in nasal secretions, saliva, urine and manure promote the spread of disease. Their removal is critical to any sanitation program.

GUIDANCE

1. Recommended procedures

- a. The sanitation SOP should be used in conventional barns and the alternative cleaning SOP should be used in bedded barns and barns without sufficient water for washing and disinfection.
- b. Clean all-in/all-out barns thoroughly between each pig production batch.
- c. Periodically free up sections of the barn and allow for thorough sanitation between groups of pigs to break disease cycles and reduce infectious pressure.
- d. Avoid cleaning and disinfecting when pigs are in the same room or pen. Pressure washing aerosolizes manure and microorganisms that can be inhaled by the pigs. These aerosolized particles may impact food safety by introducing pathogens (such as *Salmonella*) to previously uninfected pigs, or may cause other health problems in the animals.

- e. Allow cleaned surfaces to dry completely prior to introducing pigs.
- f. Adapt the biosecurity measures and SOPs according to your herd's health status.
- g. Record the type of sanitation SOP applied and date of application on the Barn Sanitation Record (R-F).
- h. Ask your suppliers of chemical products (e.g., medication, cleaning products, bait, insecticides, pesticides) how to adequately dispose of unused/expired chemical products.
- i. Remove dust and cobwebs, which offer a place for bacteria and viruses to grow and survive.
- j. Consider the use of foaming applicators, which make the application of cleaning and disinfecting agents more visible. This helps to ensure you have covered all surfaces and may help increase contact time with surface materials.

2. Detergent

- a. The use of detergents facilitates the removal of biofilms. A biofilm is a type of organic matter that sticks to pen floors, partitions and walls that provides an environment that protects bacteria and viruses from being removed and disinfected easily.
- b. It is recommended that all loose, organic material (e.g., manure, dirt, bedding) be removed before using a detergent.

3. Disinfectant

- a. The appropriate disinfectant should be chosen through consultation with a professional. The choice of an effective disinfectant should be based on the specific barn's criteria (construction materials, quality of the barn's water supply, etc.). Be aware that each disinfectant may require a different exposure time. It is recommended that all loose and organic material be removed before using a disinfectant.
- b. Read the label directions carefully to ensure proper dilution rates and exposure times. If pen surfaces (floor, walls and gates) are old and irregular (e.g., have cracks), the concentration should be increased.
- c. Hard water can deactivate many disinfectants and render them ineffective. It is recommended that you test the water to determine the most appropriate disinfectant for your type of water.
- d. Disinfectants are more effective with longer contact and drying time. Ideally, barn rooms should be completely dried before receiving pigs.

4. Lime application

- a. Ground limestone can be used as desiccant (drying agent) to dry pens and flooring, and consequently act to reduce pathogen loads through the drying process. It can also increase pH to around 8 on the surface it is applied to, which might have an impact on certain pathogens as well, but its primary mode of pathogen reduction is through drying. Ground limestone could be used in place of a disinfectant on surfaces that are not conducive to the application of liquid disinfectant, such as earthen ground.
- b. Other forms of lime, such as quicklime and hydrated (slaked) lime, are much more corrosive when they come in contact with water or moist surfaces and can cause chemical burns on people and pigs. When mixed with water, they elevate the pH to above 12.5. After they dry again, they become less corrosive; however, reintroduction to water can once again drastically increase the pH until the lime has fully reacted and neutralized. Quicklime should not be used as part of a cleaning procedure, as it is even more dangerous to work with than hydrated lime. If you choose to use hydrated (slaked) lime as part of a cleaning procedure, e.g., "white-washing", you should first consult with an expert on the procedure, taking into account when it will be safe to introduce pigs back into the area, and ensure full personal protective equipment is used during the procedure.

Consult the Fact Sheet F-2 Lime Application for more details.

? AUDIT QUESTIONS

Q#	Audit Questions and Interpretations	Verification			
		Compliant	NC-Minor	NC-Major	N/A
	<p>Verify that the Sanitation SOP (SOP 2.2.1) and/or the Alternative Cleaning SOP (SOP 2.2.2) is in place and includes all required elements.</p> <p>If pigs have access to the outdoors, go to section 10.2 to complete this question.</p>	<p>Full and Partial Validation:</p> <ul style="list-style-type: none"> ➤ SOP 2.2.1: Sanitation ➤ SOP 2.2.2: Alternative Cleaning ➤ interview 			
Q2.2.1	<p>a. If the Sanitation SOP (SOP 2.2.1) is used, does it include:</p> <ul style="list-style-type: none"> i. at least one cleaning measure? ii. at least one washing measure? iii. at least one disinfection measure? <p>If a sanitation program does not include cleaning, washing and disinfection, go to question 2.2.1b, below.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<p>b. If the Alternative Cleaning SOP (SOP 2.2.2) is used, does it include:</p> <ul style="list-style-type: none"> i. at least one cleaning measure? ii. at least one disinfection measure? 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q2.2.2	<p>Verify that the Site Manager applies the Sanitation SOP (SOP 2.2.1) and/or the Alternative Cleaning SOP (SOP 2.2.2) at least once every 12 months in each area of the barn.</p> <p>If pigs have access to the outdoors, go to section 10.2 to complete this question.</p>	<p>Full and Partial Validation:</p> <ul style="list-style-type: none"> ➤ SOP 2.2.1: Sanitation ➤ SOP 2.2.2: Alternative Cleaning ➤ observation (full validation only) ➤ interview 			
	<p>Is the Sanitation SOP (SOP 2.2.1) and/or the Alternative Cleaning SOP (SOP 2.2.2) applied at least once every 12 months in every section of the barn(s)?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q2.2.3	<p>Verify that feeding and feed storage areas, as well as any areas that pigs can access (including alleyways), are free from chemical products (e.g., pesticides and disinfectants).</p>	<p>Full and Partial Validation:</p> <ul style="list-style-type: none"> ➤ observation (full validation only) ➤ interview 			
	<p>Are feeding and feed storage areas and any areas that pigs can access (including alleyways) free from chemicals products (e.g., pesticides and disinfectants)?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Q2.2.4	<p>Verify that measures are in place to minimize contamination of the feeding area with urine or feces.</p>	<p>Full Validation:</p> <ul style="list-style-type: none"> ➤ observation ➤ interview 			
	<p>Are measures to minimize contamination of the feeding area by urine or feces in place?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

N/A = not applicable; SOP = standard operating procedure



LEVELS OF COMPLIANCE – EXAMPLES

COMPLIANT

- › SOP(s) are complete and implemented.

MINOR NON-COMPLIANCE *Timeline: 12 months*

- › SOP(s) are incomplete or not available.

MAJOR NON-COMPLIANCE *Timeline: 60 days*

- › No Sanitation SOP (SOP 2.2.1) or Alternative Cleaning SOP (SOP 2.2.2) has been developed or implemented in the last 12 months (taking into account animal care and seasonality).
- › Chemical products are kept in feeding areas, feed storage areas, or areas that pigs have access to.

