

With Denise Ancharski-Stutler, BS, MS, CPJA

Sanitation is one of the most important and difficult aspects of the management of a rabbitry. The majority of us tend to focus mainly on the breeding and nutrition programs of our rabbits.

Both of these are the backbones of a rabbitry, but can quickly be affected if one fails to establish good sanitation practices. In the article that follows, information about establishing a sanitation program is discussed. The removal of waste products will result in decreased ammonia levels which will result in decreased respiratory ailments. By developing a sanitation program in your rabbitry, your herd will be healthier and you may see improvements in your breeding, show, or meat production programs.

There are various terms that are used to describe a hygiene plan for a rabbitry:

CLEANING is the removal of visible debris (urine, feces or fur), from an area.

SANITIZATION is a process by which the number of microorganisms on fomites (inanimate objects such as cages, feeders and grooming supplies) is reduced to an acceptable level. This process does not eliminate all microorganisms.

DISINFECTION is a form of intense sanitization that reduces the level of a particular pathogenic microorganism (typically will destroy the organism, except for spore form of the microorganism). Common disinfectants include bleach, Vanodine™, and Simple Green d Pro 5™. Bleach (sodium hypochlorite) is inexpensive, readily available, and kills many

viruses and bacteria; however, bleach is corrosive to cage wire. Vanodine™ is an iodophor compound (iodine base with a detergent added) and inactivates viruses, bacteria and fungi. Simple Green d Pro 5™ is a quaternary ammonium compound and is effective against bacteria, viruses, and fungi. This product can be purchased at many local home improvement stores.

Use caution when using any disinfectant, some people prefer to wear gloves, eye goggles, and a mask.

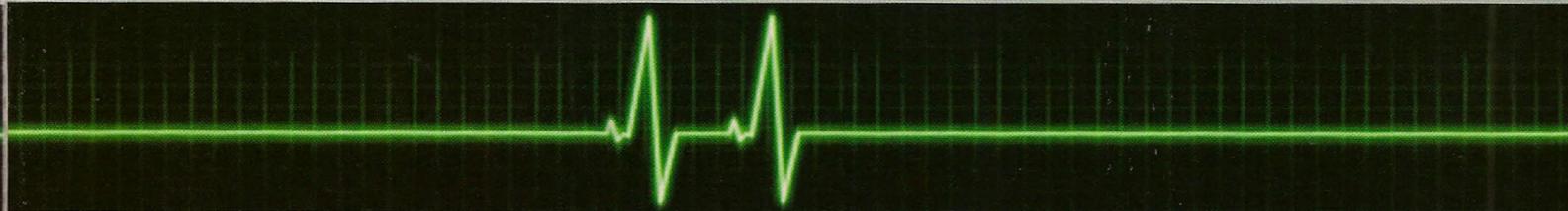
STERILIZATION is a process of elimination of all microorganisms



including spores rendering the item sterile.

The way you clean a rabbitry will depend on the type of caging you have and the location of your cages. All non-cage related equipment (feeders, water bottles, grooming supplies, nest boxes) should be cleaned on an as needed basis to maintain hygienic conditions. Cleaning is necessary to remove solid waste from equipment and allow for enhanced disinfection/sanitization. For those who have indoor rabbits, you will need to dump the tray pan to get rid of the waste at least weekly. If your rabbits use a litter box, you will want to empty and refill the litter box several times a week. For those whose rabbits are housed in hutches with a wire bottom floor and the manure accumulates on the ground under the hutch, you will want to remove the manure as needed to prevent a breeding ground for flies. The frequency of which you remove the manure will depend on the time of year and if you are raising earthworms. For those who rabbits are housed in hutches with a solid bottom floor or use floor mats, you will need to remove the manure several times a week to maintain hygienic conditions.





The following two types of caging systems are typically found in a building: hanging cages and stackable caging units. For the hanging type cages, manure will accumulate under the cages and need to be removed at regular intervals to maintain hygienic conditions. Some rabbitries are equipped with a wash down system that allows the user to connect it to a sewer/septic lines or waste collection bins. Stackable cage units usually have drop pans under them; these pans should be dumped weekly to get rid of the waste. Another feature that is typically found in large rabbitries is an automatic watering system. These systems should be flushed with diluted bleach frequently to prevent build up of debris, algae, and bacteria.

The terms sanitization and disinfection are often used interchangeably with disinfection referring to a more intense process. The majority of rabbitries do not sterilize their rabbitry equipment unless they have special equipment or chemicals (autoclaves, ethylene oxide gas, or hydrogen peroxide gas). The information provided below is the program that I use in our small-enclosed rabbitry that has stacking cage units on wheels. Our rabbitry is a 120 square feet shed with electric, a cement floor, insulated walls covered with wallboard, two side windows, wall air conditioning unit, and a partial loft for storage. On a weekly basis, we remove any manure from the cage bottoms and any fur/wool from the inside of the cages. The fur and wool are removed from the cages with a wire brush and a wet/dry vacuum. All waste is removed from the drop pans and the pans are refilled with pine shavings to absorb the waste. Water bottles and feed cups are disinfected with mild bleach and dish soap solution at least once a month. The bleach solution used is $\frac{1}{2}$ cup of bleach to one gallon of water and the contact time is at least thirty minutes. Grooming supplies (brushes, combs, carpet squares, grooming tables, and scissors) are disinfected with a diluted Vanodine™ solution after each use. Nest boxes are disinfected after each litter with a diluted bleach solution, rinsed, and allowed to dry in the sunlight. Travel cages are disinfected with Vanodine™ spray solution after each rabbit show.

Three times a year, we thoroughly disinfect our entire rabbitry. All animals are removed from their home cage into travel cages. Water bottles, feed cups, toys, resting mats and hayracks are removed from the cages and placed in buckets of diluted bleach. These items are allowed to soak for an extended period of time (at least 30 minutes) and then are rinsed thoroughly with water. All stacking cages are removed from the rabbitry shed and all the pans are dumped. Visible manure and

fur/wool are removed from the cages. Some people prefer to use propane flame torches to remove the fur/wool and hay. For obvious reasons, you must exercise extreme caution when using the flame torch. If there is a heavy build-up of urine scale, we will spray the cages with vinegar (acetic acid). The vinegar will help break down the high concentration of calcium carbonate in the urine scale. Cages and drop pans are then power washed with plain water to remove urine scale and any manure. After this initial power wash, the cages and pans are sprayed with one of the following disinfectants: bleach, Vanodine™, or Simple Green d Pro 5™ with a contact time of at least 30 minutes. After this time, the cages and pans are power washed with plain water to remove the disinfectant and allowed to dry in the sunlight. We also use this time to make any repairs to the cages especially the wheel casters.

The interior of the rabbitry is also disinfected. The walls and floor are sprayed with one of the disinfectants and allowed a contact time of at least 30 minutes. After this time, we scrub and power wash the floors and walls. The interior of the rabbitry is left to air dry before we reassemble it. During the time the rabbitry interior is drying, we check and make sure that the Country Vet Fly Spray and Lysol Air Freshener automatic sprayers are operating correctly. We use the Fly/Mosquito spray to provide control and prevention of insects. Once the rabbitry has dried, the stacking caging units are placed back in the rabbitry. The pans are refilled with pine shavings, water bottles, feed cups, toys, resting mats, and hayracks are placed back on the cages. The rabbits are returned to their cages. After the rabbitry is reassembled, all of the travel cages are disinfected with diluted bleach. The travel cages are rinsed with plain water and allowed to dry in the sunlight.

Sanitation of a rabbitry is one of the most laborious processes of the rabbit hobby. This the one area of rabbitry management that the rabbit breeder needs to put some thought into. Once you develop a program that works for your rabbitry, do not get lazy and cut corners. This makes more work in the end and you could end up with disease outbreaks and decreased production! Both disease outbreaks and decreased production will cost you more time, money and cause many more headaches than if you would have just rolled up your sleeves, turned up the radio and scrubbed cages!!



Denise has a Bachelor Science degree in Small Animal Science and a Master's degree in Microbiology and Immunology. She has been breeding and showing rabbits for over 20 years and currently raises American Fuzzy Lops and Mini Lops.

