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Footbaths for Animal Facilities: Easier Than You Think!

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WHAT LURKS ON THE SOLES OF MAN

Did you know that humans are often the main reason for the spread of disease? Human footwear—the “sole” of the problem—is often not cleaned. Biosecurity involves training people and managing risk so that farmers do not unintentionally introduce disease to their livestock. Some organisms can live for days or weeks in dust and dirt, both of which stay on footwear. Footbaths are an easy, inexpensive, and an extremely valuable element of farm biosecurity. Biosecurity is a mindset: learn how to use it for the benefit of farm animals.

**FOR BIOSECURITY
PURPOSES
STEP INTO FOOT
BATH BEFORE
PROCEEDING**

Figure 1. Sample biosecurity sign.

KEYS TO FOOTBATH SUCCESS: LOCATION, LOCATION, LOCATION

Closely examine the traffic patterns in and around the area where animals are housed. Place the footbath in a location where everyone who comes into the farm must pass through. Post a sign (fig. 1) indicating that footbaths must be used and give directions on proper cleaning methods. If possible, place the footbath on a solid surface such as concrete, brick, or cinder block. This will allow people to use the footbath without creating mud in the area. A solid surface can also be swept or hosed to eliminate the buildup of dirt that can quickly pollute a footbath.

EQUIPMENT

- A tray with short sides, such as those used to bus tables in restaurants or a cat litter pan (fig. 2).
- A long-handled utility brush (fig. 3).
- A hose or spigot for mixing new batches of disinfectant (fig. 4).
- A small synthetic bristle or “fake grass” doormat (fig. 5).
- Depending on the location and the type of disinfectant used, a plastic lid may be needed to prevent contamination or inactivation of the disinfectant. A plastic storage container (whose sides are not transparent) with a lid may be beneficial (fig. 6).

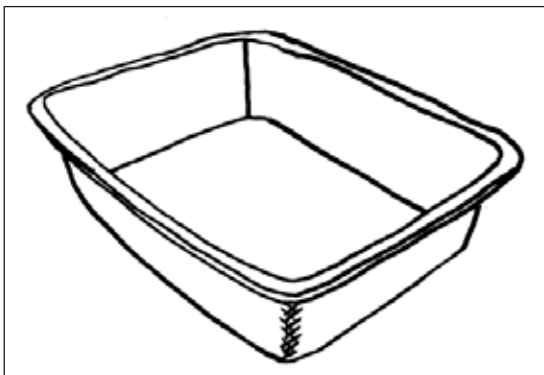


Figure 2. A cat litter pan is a good size for use as a footbath.

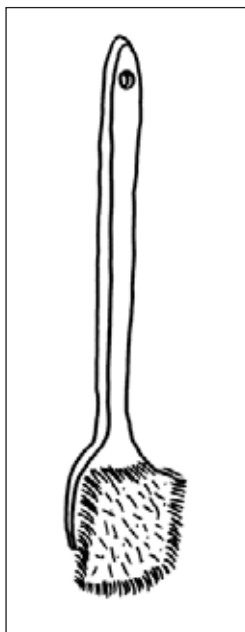


Figure 3. Long-handled utility brush

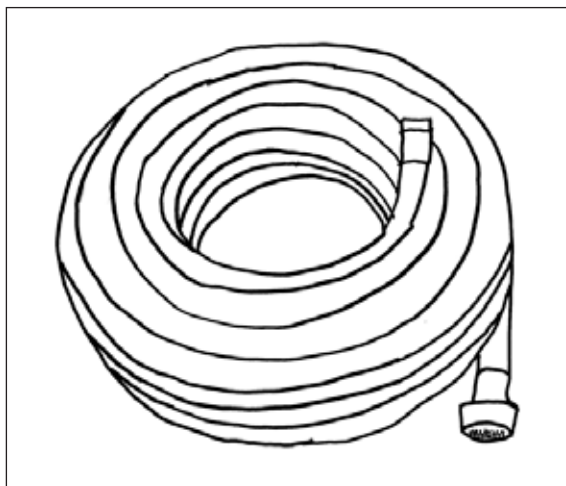


Figure 4. A hose is handy for mixing disinfectant.

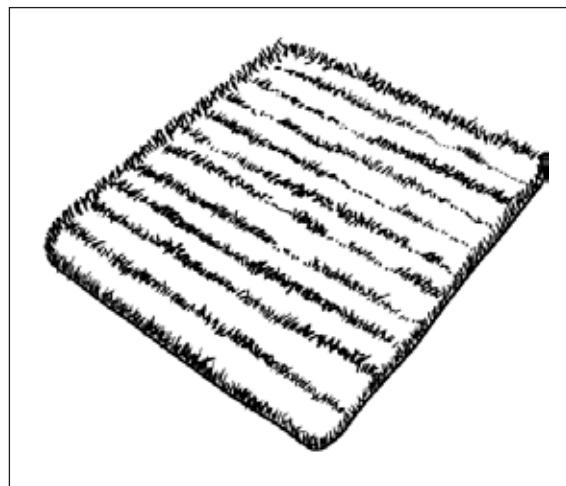


Figure 5. A mat should be used in the bottom of the footbath.

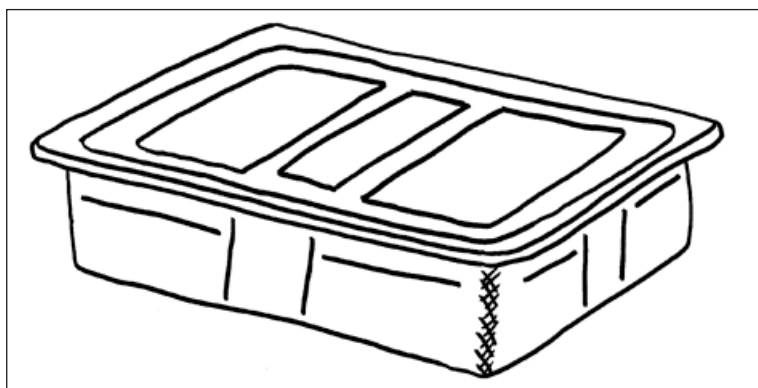


Figure 6. A covered container with opaque sides is another option for a footbath.

SETTING UP THE FOOTBATH

To set up the footbath, place the plastic container in the selected location. Cut the mat to fit inside the plastic container (fig. 7). Mix the disinfectant according to label directions and hang the long-handled utility brush within reach. Post directions and signs at eye level and indicate how old footbath disinfectant should be disposed. Train people in the proper way to use the footbath (see “How to Use a Footbath,” below).

DISINFECTANTS

- Always mix disinfectants according to the label directions.
- Post directions on how to mix disinfectants.
- Select a disinfectant that kills bacteria as well as viruses.
- Keep in mind that some disinfectants are inactivated by sunlight or may have other requirements. For more information on disinfectants, see PFS No. 27: *Sanitation-Disinfection Basics* (<http://animalscience.ucdavis.edu/Avian/pfs27.htm>).
- Most disinfectants can be ordered online or from your local feed store.
- Recommended disinfectants (fig. 8) include
 - Tek-Trol, made by AgriLabs
 - 1-Stroke Environ, made by Steris



Figure 7. Footbath in preparation.

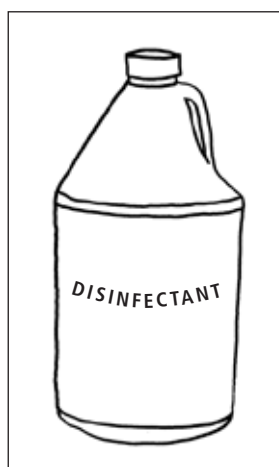


Figure 8. Disinfectant in a gallon-size container

HOW TO USE A FOOTBATH

Appropriate footwear must be worn through a footbath. Flip-flops or sandals are popular in the summer, but they should not be worn through a footbath. Read the disinfectant label carefully and inform all who use the footbath about the risks of exposure to skin. The use of plastic or rubber overshoes is strongly recommended for wearing in a footbath. If footwear is soiled when entering a footbath, the disinfecting process will be ineffective. Dedicated overshoes (plastic or rubber) should be available at the footbath for both farm guests and regular users to wear through the footbath and on the farm. Expensive footwear probably should not pass through a footbath where staining or bleaching could occur. Read disinfectant labels carefully and follow any precautions.

Remove all debris from shoes before entering the footbath. Debris includes sticks, leaves, mud, or large quantities of manure. Debris on shoes reduces the effectiveness of the disinfectant. Provide a hose in inclement weather to remove mud from shoes.

When stepping into the footbath, immerse the whole tread of the shoe into the fluid. Rub shoes vigorously on the plastic mat to ensure that the entire sole is scrubbed thoroughly. Use a long-handled brush as needed. Disinfectant should be left on the footwear after passing through the footbath (fig. 9).



Figure 9. Footbath in use.

MAINTAIN YOUR FOOTBATH

Footbaths should be cleaned as soon as the fluid begins to appear dirty; this often means weekly cleaning. Follow label instructions when disposing of used disinfectant. Footbaths should not be emptied in the immediate area of the wash station to prevent a wet, muddy area from developing. Scrub the empty container and mat with a brush and rinse them thoroughly. Add fresh disinfectant and place the mat back into the footbath. Hanging a long-handled brush near the footbath allows users to adequately clean the footbath as well as their footwear.

A HANDY ALTERNATIVE

If someone protests about using a footbath, have disposable plastic boot covers or overshoes for them to wear. These cost very little and are an effective biosecurity tool.

HOW MUCH WILL A FOOTBATH COST?

Cat litter pan	\$4.50–8.50
Mat	\$6.50–9.00
Long-handled utility brush	\$5.50–6.00
<u>Disinfectant (1 gal)</u>	<u>\$27.00–37.00</u>
Total	\$43.50–60.50

CONCLUSION

Creating a footbath is not as difficult as one may think. The setup and maintenance of a footbath is straightforward and simple. The cost of setting one up is well worth the effort when compared with the cost of replacing all the animals on a farm or paying veterinary bills due to illness. Depending on the location, it may be prudent to provide more than one footbath (i.e., for main entrances and separate quarantine areas). Many owners have rare genetic lines of livestock and want to provide their animals with the best care, so farm managers should make sure that effective biosecurity steps are being taken to prevent the introduction of disease.

RESOURCES

- Grooms, D., and D. Ross 2001. Biosecurity starts with your feet. Michigan Dairy Review 6(4): 3-5; <http://www.msu.edu/user/mdr/archives/mdrvol6no4.pdf>.
- Poultry Fact Sheet (PFS) No. 27: Sanitation-disinfection basics. UC Poultry Web Page, <http://animalscience.ucdavis.edu/Avian/pfs27.htm>.
- USDA biosecurity guide for poultry and bird owners. Program Aid no. 1885, 2006. Animal and Plant Health Inspection Service (APHIS) Web site, http://www.aphis.usda.gov/publications/animal_health/content/printable_version/USDA_BioGuide_Eng_8-2006.pdf.

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