



Practical Biosecurity Programs
Standard Biosecurity Protocol (SBP)
SBP 13

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Cleaning and Disinfection

1. **Purpose:** To reduce pathogen load and potential disease threat
2. **Responsibility:** Farm Staff
3. **Frequency:** Clean-Out
4. **Biosecurity Protocols**
 - 4.1 **Cleaning and disinfection on a dairy operation** occurs before and after each milking. For a detailed list of protocols, please refer to the Canadian Quality Milk (CQM) Program. Dairy Farmers of Canada developed the CQM, an on-farm food safety program, to help producers prevent and reduce food safety hazards and risks on their farms. For more information, please visit: <http://www.dairyfarmers.ca/what-we-do/programs/canadian-quality-milk>. Besides milking equipment, the facilities on a dairy operation are cleaned and disinfected on a weekly basis. After a calf has been removed from a hutch and placed in with the herd, a suitable disinfectant (ie. Virkon) is used to clean the hutch in preparation for its next use. In regard to barns: once the cows have been put out on pasture, the old pack with manure would be removed and the floor is allowed to dry out. Before a new bedding pack can go down, it is recommended that hydrated lime be placed on the floor to kill off any lingering bacteria/pathogens.

Cleaning and disinfection in other livestock operations

- 4.2 Once all animals/birds are shipped, take apart equipment that can be removed from the pen/barn
- 4.3 Empty left over feed from feeders and feed hoppers
- 4.4 Empty water from drinkers onto the litter/floor/bedding
- 4.5 Raise or remove feeder and drinker lines
- 4.6 Blow down and/or sweep dust and other organic material from pipes, equipment, ledges, cages, etc.

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Picture 13.1, Tablonte & Malone, 2005



Picture 13.2, Vaillancourt, 2003

- 4.7** Clean out manure, litter or bedding and other organic material using clean-out equipment for floor pens and through the manure belt and sweeping floor for cage barns
- 4.8** Organic material can be stored temporarily on a manure pad or manure shed, but needs to be removed from the farm site prior to the barn being disinfected



Picture 13.3, Oderkirk, 2010



Picture 13.4, Vaillancourt, 2003

- 4.9** Once organic material is removed, wash the pen and equipment with a hot water high pressure sprayer (1000 PSI pressure and a water capacity of 3 gallons/minutes) which allows for quick and easy washing without having to spend time on difficult spots
- 4.10** The water should contain a detergent or detergent/disinfectant to enhance the cleaning process
- 4.10** Wash cages first getting any remaining organic material out
- 4.11** Wash pen from ceiling first then wall as you travel down the barn toward the clean-outdoors/area



Picture 13.5, Oderkirk, 2010



Picture 13.6, Vaillancourt, 2003

- 4.12 Go back and then wash floor, which should have any hard to remove material softened by the previous washing activity water, moving organic material ahead of the spray as you travel down the barn toward the clean-out doors/area
- 4.13 Wash entry rooms/transition areas
- 4.14 Electrical panels should not be directly sprayed but use moist clothes to wipe clean inside and out
- 4.15 Wash any equipment removed from the pen/barn
- 4.16 If pests have been a problem, spray for flies and darkling beetles and put out bait for rodents



Picture 13.7, Oderkirk, 2010



Picture 13.8, Oderkirk, 2010

- 4.17 Clean up any rodents or insects and dispose of with organic material
- 4.18 Wash clean-out equipment (tractors, wagons, shovels, etc.) and tools



Picture 13.9, Tablonte & Malone, 2005

- 4.19 Inspect barn for cleanliness using the **SBF 2: Biosecure Clean-Out & Inspection Check-Off** and if clean, return any barn equipment back into the pen/barn and close up barn
- 4.20 Spray disinfectant on all barn surfaces and equipment, just to the point of the water running
- 4.21 Various types of disinfectant are listed in **SBP 14: Disinfectants and Pesticides for Biosecurity Purpose**. These are surface disinfectants and most are effective within the first 10-20 minutes
- 4.22 Let pen/barn dry before setting up for the next flock

5. Biosecurity Deviation Protocol

5.1 If the barn has deemed not cleaned properly upon inspection using the **SBF 2: Biosecure Clean-Out & Inspection Check- Off**, the necessary cleaning steps need to be repeated until no organic material is evident as disinfectants are ineffective when organic material is present

6. Biosecurity Records

6.1 SBF 2: Biosecure Clean-Out & Inspection Check-Off

6.2 SBF 5: Disinfectant, Pesticide & Herbicide Use Chart