Proper Use and Cleaning of Wild Bird Feeders

Bird watching is an incredibly popular activity, especially at home where 57 million people feed birds (US Fish and Wildlife Service 2018). Birds benefit from this supplemental feeding (Brittingham and Temple 1988, Rufino et al. 2014, Wilcoxen et al. 2015). However, if feeders are not properly located or maintained, our backyard pastime may have negative impacts on bird health and survival. Given the popularity of bird feeding, the potential negative effects on bird populations are not trivial. Unfortunately, feeder maintenance guidelines found in feeder books, websites, and newspaper articles vary widely, because until recently there was little research on the effectiveness of cleaning feeders to remove pathogens and reduce the spread of disease. The recent outbreaks of Highly Pathogenic Avian Influenza have generated extensive media coverage that has brought the safety of bird feeding and proper feeder hygiene practices to the attention of the average backyard bird watcher.

The purpose of this factsheet is to provide a standard set of guidelines for bird feeder use and maintenance that is based on current published literature and recommendations from state and federal agencies. This factsheet focuses on seed feeders and will be updated as new information becomes available.

Highly pathogenic avian influenza (HPAI) in Birds and Risks at Feeders

Highly pathogenic avian influenza, commonly known as 'bird flu', is a viral respiratory disease that is caused by infection from influenza A type viruses that originated in birds (Lupiani and Reddy 2009). HPAI viruses are classified as 'highly pathogenic' based on their genetic makeup and the severe impact of this disease on poultry (Pepin et al. 2014). Bird flu was first detected in the U.S. in 2006 in wild birds (Ramey et al. 2022), but more recently (starting in 2022) newer strains of HPAI have become widespread across North American and have caused tremendous

losses and impacts to commercial and backyard poultry and egg production, the dairy industry, and wild bird populations (Nguyen et al. 2025). Although some cases of HPAI have been found in wild mammals (like red foxes), a minimal number of human cases of HPAI have been found (US Centers for Disease Control and Prevention 2026). Nonetheless, despite the low risk to humans and our pets, many people might be concerned about coming into contact with the virus and how it might affect the backyard birds they like to watch and feed.

Since 2006, the U.S. Department of Agriculture and many other federal, state, and international partners have collaborated on a very extensive HPAI surveillance program focused on wild birds (USDA APHIS 2026). There are few documented cases of HPAI infecting songbirds and other common visitors (including hummingbirds) to backyard bird feeders (Ringenberg et al. 2024). So is it safe to continue to feed the birds? Unless you keep domestic poultry or waterfowl, the use of bird feeders poses little risk of spreading HPAI among wild birds and should be safe for feeder birds and humans. However, if wild ducks or geese frequent your feeder area, you should discontinue feeding birds until no waterfowl are present for a few days. Feeding wild ducks and geese in your yard or in more public places (like a park) is not recommended for many reasons, but importantly because it increases the spread of HPAI substantially.

Placement of Feeders to Reduce Window Collisions

In the North America alone, 1 to >3 billion birds die annually from collisions with reflective or transparent glass (Klem 2025). In general, collisions with windows are dependent on context. The presence of feeders has been shown to affect the rate of bird collisions with windows and glass (Dunn 1993, Klem 1991, Klem et al. 2004), with collisions nearly doubling when feeders were present (Kummer and Bayne 2015). However, Hager et al. (2013) found a strong positive relationship between bird feeder presence and abundance of common bird feeder species, but not between the presence of bird feeders and bird-window collision rates. Placing feeders close to windows (within 1 meter) or near windows with angled glass has been suggested as a way to reduce collisions (Klem 1991, Klem et al. 2004), but collisions can still occur if the window glass is reflective. The notion that placing feeders 10 meters from a window is a safe distance stems from the design of the study: the furthest point tested was 10 m (Klem et al. 2004, Klem 2021).

Unfortunately, there is no safe distance for feeder placement near reflective or transparent windows. The solution is to treat your windows and then install feeders at the preferred distance for viewing. Many options are available from bird safe glass windows to do-it-yourself (DIY) options to retrofit existing windows. Most homeowners will need to retrofit their windows to prevent collisions. The simplest options are to install screens over windows or to apply a pattern of objects (e.g., stickers) to the outside of the window to make it visible to birds (Klem 2025). The pattern must be spaced closely enough together (2”x2” on center is ideal; 2”x4” on center also works), so that the birds don’t try to fly through the spaces (Sheppard 2019). There are

many commercially available and DIY options for temporary or permanent solutions (Solutions for Homes … 2026). Ideally, all the windows of a house should be treated to prevent bird collisions. However, a good start is to treat all the windows of a house facing your feeder and monitor the remaining windows for bird collisions. Any windows that receive future collisions should be treated as well.

Feeder Hygiene and Maintenance

Feeders must be cleaned regularly to prevent the spread of pathogens and parasites. Avian bacterial diseases have been linked to seed feeders including Salmonellosis (Lawson et al. 2014) and Mycoplasmosis (Hartup et al. 1998) with *Mycoplasma* transmission demonstrated to occur from contaminated feeders to birds (Dhondt et al. 2007). In addition, Trichomonosis, an endoparasite infection, has been linked to feeders (Lawson et al. 2018). Finally, moist seed in feeders may cause Aspergillosis, a fungal respiratory disease (Friend and Franson 1999) or impacts from the mycotoxins these fungi produce (Lawson et al. 2018).

Also important to the people who maintain bird feeders is the human risk of infection from handling bird feeders. Although rare, Salmonellosis in humans has been associated with handling contaminated feeders (Kapperud et al. 1998). Always practice proper personal hygiene and wash your hands after filling or cleaning feeders.

Proper Cleaning Method

To minimize the human risk of infection while cleaning feeders, always wear proper protective equipment and wash feeders in an area with proper ventilation. Wear latex/nitrile gloves that are disposable or use a pair of reusable gloves that are designated only for washing feeders. Eye protection may be necessary when working with bleach. If available, use a deep utility sink or large bucket outside to wash feeders by hand. Even though some references suggest cleaning feeders in home dishwashers, this is not recommended. Consumer dishwashers may be effective in cleaning bacteria, but this efficacy varies based on the type of detergent used, water temperature, and length of the washing cycle (Kudla et al. 2025). If proper sanitization has not occurred, pathogens may remain and be transferred to plates and eating utensils upon the next use. More importantly, feeders should not be brought into a kitchen or other food preparation areas. Pathogens might inadvertently be transferred to food preparation surfaces before or during the cleaning process.

The following cleaning procedure is based on the results of Feliciano et al. (2018) who found 10% bleach and scrubbing with dish soap and water to effectively reduce pathogenic bacteria. First, remove any remaining seed from the feeder. Next, disassemble the feeder and shake out any loose debris into a trash bag. Do not use forced air or a vacuum cleaner to remove debris. This may aerosolize any pathogens present and increase your own risk of infection. For feeders

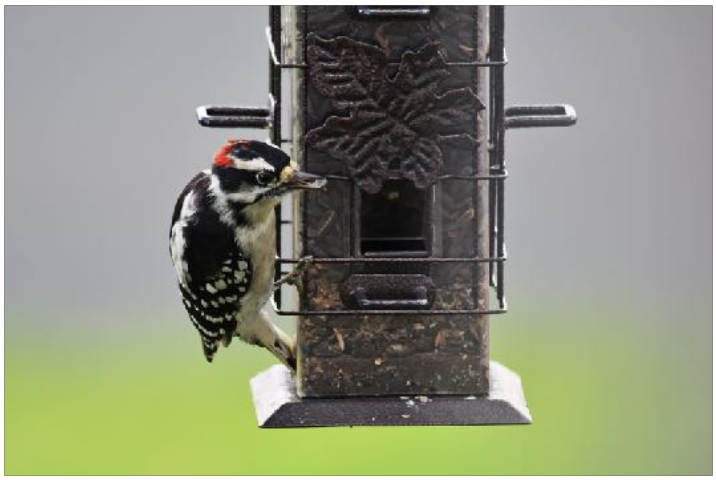
that have minimal visible debris stuck to the feeder (feeders with light use or very regularly cleaned), cleaning with a bleach soak or scrubbing with soap and water are equally as effective.

Bleach Soak Option. Mix up a 10% bleach solution (1 part bleach to 9 parts water) in a bucket that is large enough to fully submerge all parts of the feeder. Soak feeder parts for 10 minutes, rinse with water, and let air dry.

Soap and Water Scrubbing Option. Fill a bucket with enough water to fully submerge all parts of the feeder and add 1-2 teaspoons of dishwashing liquid per gallon of water. Soak feeder parts for about 5 minutes. Scrub all surfaces with a sponge and/or cleaning brush until no visible debris remains. Rinse all parts with clean water and let air dry.

For feeders with heavy debris or feces stuck to the feeder, scrubbing with soap and water alone is no longer effective and a bleach soak alone has reduced effectiveness. These feeders should be cleaned first by scrubbing with soap and water to remove debris and then soaked in 10% bleach. These two methods combined are the most effective at removing pathogenic bacteria from feeders. When in doubt, use a combination of the two methods to clean your feeders. Although other cleaning products, such as vinegar, have been suggested for use in cleaning feeders, the effectiveness of other products is unknown and they should be avoided until tested.

Proper Cleaning Interval



Clear research-based evidence is lacking for the proper interval to clean feeders. General aerobic bacteria levels were found to peak at feeders after four weeks and pathogenic bacteria have been detected after three weeks of feeder use (Bressler et al. unpublished ms). Cleaning feeders with 10% bleach every two weeks might be effective at controlling bacteria levels if debris is fully removed (Boyd et al. 2014). More rigorous daily cleaning of feeders with 10% bleach has been shown to reduce coccidian endoparasite levels in birds, but only in some environments (Schaper et al. 2021). Based on this limited evidence and the likelihood of people to clean feeders, seed feeders should be cleaned at least once a month or, if feeders accumulate heavy debris/feces, once every two weeks.

Seed Debris on the Ground

Over time the ground below feeders accumulates seed hulls and feces as well as spilled intact seeds. The debris below feeders is an area where many ground-feeding birds, such as sparrows and doves, forage for intact seeds. This is a concern because pathogenic bacteria and fungi have been detected in the debris (Bressler et al. unpublished ms). Although no research has examined cleaning strategies, raking the pile of debris up about once a month and disposing of it in the trash is recommended. Alternatively, the debris could be buried under fresh wood mulch or leaves. Do not use a leaf blower to clean up the debris because this could aerosolize any pathogens present and increase your own risk of infection.

Non-seed Feeder Hygiene

Less is known about proper hygiene practices for other types of feeders, such as nectar or suet feeders. Microbial growth in sucrose solutions in nectar feeders increases over time and pathogenic bacteria have been detected here (Lee et al. 2019). In addition, higher coccidian endoparasite levels have been linked to use of nectar feeders, but no pathogens were detected directly on feeders (Erastrova et al. 2022). Because of the possibility of rapid microbial growth, sucrose solutions in nectar feeders should be changed daily in hot weather and every two to three days in cooler weather (Lee et al. 2019). Clean feeders using the same methods as recommended for seed feeders at least weekly due to the likelihood of microbial growth in the sucrose solution and feeder ports.

Additional Recommendations

Proper use and maintenance of your feeder should reduce the likelihood of disease transmission to birds at your feeders. This includes selecting feeders that keep seeds dry or allow water to drain out readily, reduce the accumulation of feces where possible, and come apart easily for thorough cleaning. Any seed that remains wet or shows visible signs of microbial growth should be discarded and the feeder should be cleaned before further use. To ensure you routinely use a clean feeder, consider purchasing a few extra feeders. This will allow you to swap out a clean feeder for a dirty one immediately and let you clean your feeder(s) when time and conditions allow. A final recommendation is to make a feeder cleaning kit consisting of a 5-gallon bucket with lid, long latex/nitrile gloves, cleaning brushes, and sponges. Only use these cleaning implements for feeders to prevent any risk of cross contamination.

What to do if You Find a Dead or Sick Bird in Your Backyard

Despite our best efforts to maintain a hygienic feeding area, disease outbreaks may occur naturally because of the high density of birds that often occur at feeders. If you find a dead bird, contact your state wildlife agency and/or state health department to determine if they want to test the bird for HPAI or another possible disease. For large numbers of dead birds, contact the USDA by calling 1-866-4-USDA-WS or 1-866-487-3297. Follow the USDA's instructions on

how to safely collect or dispose of dead birds by following this link (www.aphis.usda.gov/sites/default/files/fs-hpai-dead-wild-bird.508.pdf) (USDA APHIS 2022).

If you see a sick bird in your yard, do not pick it up or try to catch it immediately. Observe its behavior and note the signs of illness. Call your local wildlife rehabilitation center or veterinarian to ask for help before trying to bring in the bird. They will provide you with guidance on whether or not to intervene in your situation and provide directions on how to handle the bird and where to bring it. When a sick bird(s) have been detected in your yard, consider taking down your feeders for a couple of weeks to limit the spread of any disease at your feeders, although evidence for the effectiveness of this strategy is mostly lacking (Dayer et al. 2024). Before returning your feeders to use, clean them thoroughly by both scrubbing with soap and water and a bleach soak, as described above. Pay attention to the birds coming to your feeders to ensure that diseased birds are still not present.

Summary

To keep feeders safe for birds, homeowners should treated their windows to prevent bird collisions and practice regular cleaning of feeders and the ground around them to minimize the spread of disease. The risk of avian influenza among songbirds and other feeder birds is low, so it is safe to continue feeding birds unless there are poultry or waterfowl on your property. Follow the recommendations below to ensure that the birds using your feeder stay healthy and you are protected from disease.

- Choose a feeder that protects seeds from moisture, limits the accumulation of feces, and easily comes apart for proper cleaning.
- If seed in your feeder becomes wet, empty it into the trash and clean your feeder before returning to use.
- For nectar feeders, replace the sugar solution every day in hot weather or every 2-3 days in cooler weather.
- Seed feeders should be cleaned at least once a month, and nectar feeders should be cleaned once a week. Follow the detailed methods described above to properly clean feeders.
    - If feeders are cleaned often or have light debris visible, scrub feeders with soap and water or soak in 10% bleach.
    - If feeders have not been cleaned regularly or have heavy visible debris and feces, scrub with soap and water and use a 10% bleach soak.
- Wash feeders away from food prep areas, such as outside or in a utility sink, and wear latex/nitrile gloves.

- Seed debris below feeders should be raked up and disposed of in the trash or covered with mulch at least once a month as well.
- Monitor birds at your feeder for signs of health.
    - If birds show signs of disease, consider taking down feeders and pausing feeding for a couple weeks.
    - If a major disease outbreak occurs in your area, follow the recommendations of state and federal agencies regarding feeding practices.
- Always practice proper personal hygiene and wash your hands thoroughly after conducting any feeder maintenance or cleaning.

About the Ornithological Council

The Ornithological Council is a consortium of scientific societies of ornithologists; these societies span the Western Hemisphere and the research conducted by their members spans the globe. Their cumulative expertise comprises the knowledge that is fundamental and essential to science-based bird conservation and management. The Ornithological Council is financially supported by our ten member societies and the individual ornithologists who value our work. If the OC's resources are valuable to you, please consider joining one of our member societies or donating directly at Birdnet.org. Thank you for your support!

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