



Battling Birds

A Q&A on Pest Birds and Preventing their Presence in Food Plants

By Lisa Lupo

There is no question that birds in a food facility can be a food safety risk, causing potential product contamination, inspection failure, or even fines or plant closure. But food plant personnel often do have questions related to controlling and preventing bird presence, such as: Why is it important to keep birds away from food facilities? What can be done

if a bird gets in? What can plant personnel do to help in the battle against birds?

To get expert answers to these and other questions, we went to the experts: pest management professionals. Following are insights from McCloud Services Technical Director Pat Hottel; McNeely Pest Control President Scott McNeely; and Sprague Pest Solutions Special Services Manager Keith Rowney.

Q. Why is it important to keep birds away from the plant—not just out of it?

Hottel: Even the most conscientious of food plants will have potential avenues of entry for birds at one time or another. If building design and landscaping choices attract birds to the facility, this increases the risk that a bird will make it indoors. There also can be some secondary insect pests



BIRDS ARE DIFFICULT TO ERADICATE once they frequent a food processing facility. They pose a threat to the food by carrying disease-causing microorganisms, contaminating product areas with excreta, feathers, or external parasites such as mites. The most common species involved are pigeons, sparrows, and starlings, and the most common microorganism spread by birds is *Salmonella*—which up to 50% of house sparrows were found to contain. *Campylobacter jejuni* also has been readily isolated from wild birds.

While the best and most effective means of controlling birds is to eliminate nesting and feeding sites on the building(s) and in the vicinity, other bird repellent or control options include:

- **Bird repellent systems.** These work to scare and deter birds from roosting areas.
- **Scaring devices.** Decoys of natural predators, such as owls and hawks, have been used to scare birds, but often become ineffective after birds learn to ignore them.
- **Sticky pastes.** Pastes can be applied to roosting areas to entangle birds and frighten them away.
- **Electrical wires.** Wires that emit a shock to roosting birds can be effective but are difficult to maintain and costly to operate.
- **Netting.** Placing netting or chicken wire over nesting sites such as trusses on a loading dock can be very effective. This has been used extensively to prevent pigeons from roosting on monuments and federal buildings in Washington, D.C.
- **Entry barriers.** Designed to block entry to a building, barriers include devices such as automatic doors, vertical plastic strips, and high-velocity air curtains.
- **Needle strips.** Needle strips are applied to ledges, rooflines, and other roosting points. They have been shown to be very effective if installed correctly.
- **Traps.** Traps can effectively remove pest bird. Starlings are the most easily trapped. Traps can become expensive, because they must be examined regularly so that accidentally trapped nontarget species are not destroyed.
- **Poisons.** Baiting and poisoning of birds is debatable, and this is usually a last resort when other controls have failed. Poisons are indiscriminate, having the potential to harm desirable bird species as well as pest birds. Usually it is recommended that only professional pest control applicators use toxicants for bird pests.

Adapted with permission from Safe Food Guidelines for Small Meat and Poultry Processors: A Pest Control Program by Kevin Keener (Purdue University Extension Services).

associated with bird nests (such as dermestids), and foodborne illness pathogens can be tracked in on shoes when bird droppings are on pathways to the plant. From a worker health and safety standpoint, diseases, such as histoplasmosis, also can be associated with bird droppings.

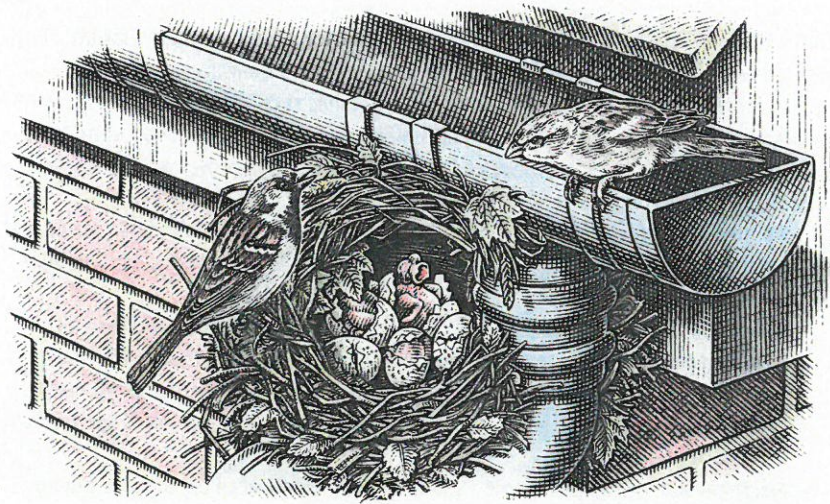
McNeely: If birds are nesting, perching, roosting, and/or feeding immediately on or adjacent to a facility, there is always increased potential for contamination by droppings, feathers, or nesting materials that may be blown, transported, or translocated into a facility. In addition, the closer birds

are located to the facility, the greater the potential for their entry into the building.

Rowley: Birds that are attracted to facility exteriors will establish roosts and nests. The more comfortable they become with human activity, the more likely they are to move into the facility. Birds that visit the facility regularly for resources, food, and water have ample opportunity to contaminate exterior equipment, conveyances, and stored pallets. For example, with Canada geese increasingly seen residing in or near facilities, their volume of waste is easily introduced into plants on employee footwear.

Q. What have you seen as the greatest challenge in bird control at food or beverage processing plants?

Hottel: Food processors sometimes underestimate the importance that landscaping choices have on the impact of birds in and around a facility. I was asked once what recommendation I have for landscape choices around food plants; I responded, “Grass.” It seems a bit simplistic and lacking in landscape creativity, but trees and dense shrubs can encourage a wide variety birds and, all too often, those trees are near docks or other doors. Also it often is pest birds, such as



Birds increase the potential for contamination by droppings, feathers, or nesting materials.

English house sparrows or European starlings, which are attracted to these trees. The second issue is the structural component of buildings like overhangs and ledges. We can bird proof these areas but “sticker shock” can sometimes follow a bird-proofing bids.

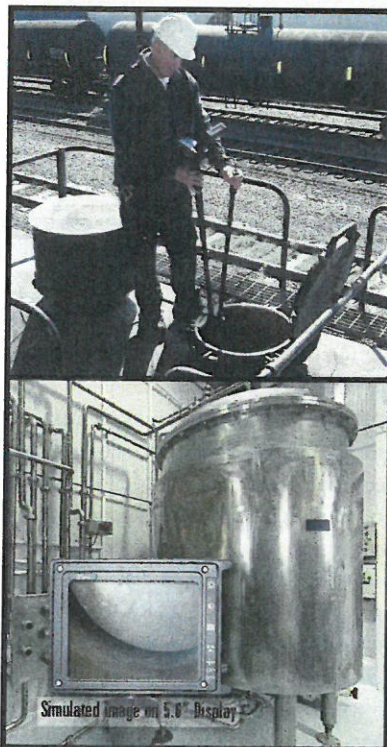
McNeely: One of the greatest challenges is educating the staff on the importance of

implementing preventive programs to avoid bird issues. This includes all staff members—from facility maintenance, who may repair doors and seal openings, to forklift operators, who may have dock doors open during shipping and receiving periods, to senior company management, who need to recognize, implement and enforce ongoing

policies that will minimize the potential for bird issues in and around the facility. It also extends to third-party contractors, such as landscaping service personnel who maintain trees and shrubs.

Rowley: For plants in design or under construction, the biggest challenges are architectural elements and landscaping selections that were not reviewed for the likelihood of future bird pressures, such as canopies constructed without specifications for exclusion. The purlins, beams, girts, corrugated roofing, piping, light conduits, and other structural elements offer protection from the weather, as well as roosting and nesting sites—an open invitation to birds. With respect to landscaping, making the site less attractive to birds is rarely considered. Just as thick ground covers are poor choices for effective rodent prevention, thick trees alongside facilities attract and provide harborage for birds. Additionally, many plants, such as ornamental grasses, provide food for birds.

In existing facilities, the biggest challenge is the failure to proactively develop action plans and associated budget dollars to ad-



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dress potential bird activities. Often, action plans are only developed and approved when auditors or clients have cited contamination and bird activity as deficiencies. Brand damage may have already occurred and the required control measures may be extreme and expensive at this point.

Q. What are some bad plant practices you've seen that most contribute to birds around and/or in the food plant?

Hottel: In addition to landscaping choices and structures, sanitation can be an issue around dumpsters where food availability becomes an issue. So keeping these areas clean and lids on containers, including self-closing lids on small outdoor receptacles, is advised. Feed trailers used to store food heading for hog feed or other livestock can be of special concern since they may be either poorly sealed or left totally open. Grain and grain spills around rails and load-out areas can also be of concern, and there can be people issues when birds are fed in outdoor break areas or on neighboring properties. For example, I know of a food warehouse which had an attached neighbor who put out a bird feeder, resulting in piles of spilled seed on the ground. This contributed not only to bird activity but to stored product pests. Water accumulations on roofs or the ground also can attract birds, so proper drainage is important.

McNeely: Some "bad" plant practices that contribute to nuisance bird issues include: employees leaving dock and pedestrian doors open when not in use; having pipe and line penetrations going through exterior walls that allow bird access and a nesting cavity; overhanging dock coverings or canopies that provide roosting and/or nesting conditions; and allowing trees and shrubs to mature and provide roosting and nesting habitats adjacent to facilities.

Rowley: Of the many plant practices which contribute to bird activity and contamination, several have a dramatic impact:

- Open storage of raw ingredients and packaging, especially of agricultural products, as well as open piles, totes or trailers of vegetables and fruits invite bird depredations and contamination.

- Improper garbage handling (e.g., open refuse piles, over-full dumpsters, leaky or damaged compactors, open trailers, infrequent trash pickup and inadequate trash area maintenance) contribute significantly to bird infestations.
- Birds, particularly house sparrows, are drawn to unprotected pallet stacks; fecal contamination is certain on these hard-to-sanitize pallets and sparrows are frequent carriers of *Campylobacter*.
- Despite plant rules, doors often are left



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open when not in use—because they are inconvenient, the facility is too hot, or workers are unconcerned about risk. Similarly, damaged siding or oversized penetrations around pipes, etc., often are not sealed, allowing bird access.

- Many facilities require separators, settling ponds, and other catchments for waste water. These equipment and water basins often are unprotected by netting, thus providing continuous water resources for birds and oth-

er pests. Similar problems are posed by improperly draining roofs, gutter systems, and surrounding paved and gravel areas which are not optimally graded.

Q. What can plant personnel do to help in the battle to keep birds out?

Hottel: Report bird sightings especially in more remote areas, such as the roof which may be routinely frequented by maintenance staff. It is critical they report bird activity which may otherwise go unnoticed. Having a documented and regularly scheduled roof inspection also is advised, as both bird activity and product spills can occur on roofs. Keep trees and shrubs trimmed and consider removing these. When present, there should be a minimum distance of one foot between each shrub, and tree branches should be no closer than six feet from a building. Do not provide food for birds through poor sanitation practices.

McNeely: Managers should educate themselves and workers on the importance of implementing proactive bird prevention practices. Avoid creating or allowing conditions that attract birds to or in the facility. Be proactive in addressing facility repair and maintenance needs that may impact the presence of birds. Be vigilant in maintaining all of these programs.

Rowley: The single most important step is to have quality assurance and facility management staff coordinate a bird-risk evaluation at the facility. A pest professional with extensive knowledge of bird control can evaluate the grounds, structures, and employee and plant practices for risks associated with bird activity.

Q. What can be done if bird(s) do get in?

Hottel: Harassment should be the first step in trying to get the bird out. Isolate the bird to the room it is in to prevent migration into more sensitive areas. Then open exterior doors (which is okay for this purpose), shut off interior lights, and make loud noises or use lasers to chase out the bird. Mist nets and shooting are typically the second or third step. Shooting can be faster than a mist net but the species of bird

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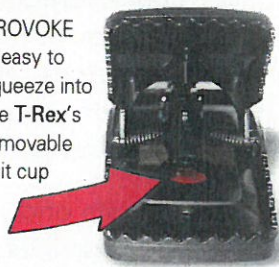


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will need to be considered as well as sensitivity of the area. Lethal methods are not allowed for some species. Additionally there may be corporate policies against this, and there can be worker and product safety concerns depending on the bird's location in the facility.

Mist nets have fewer issues but may take longer for control. It is important to have sufficient people on hand and multiple nets to expedite control.

McNeely: In some situations, birds can be "shown a way out" by simply opening one or more dock doors and turning off all or part of the interior lighting. In other situations, it may not be so simple. Mist netting, trapping devices, sticky glue boards, and, in extreme cases, sharp-shooting with very accurate air rifles, may all be potential solutions for consideration.

Rowley: Once a bird has entered, it is important to identify the species and start the removal process. Identification is important because all species, other than house sparrows, starlings and feral rock doves (pigeons), are protected under the Federal Migratory Species Act of 1918. Identification will determine whether mist netting or live trapping are viable options. Sometimes harassment with extended poles with flags on the end can chase birds out open roll-up doors. At night, a light located outside of an open door can lure birds out. Temporary removal of a skylight also sometimes works. Additional measures can be provided by bird control experts. Most importantly, after a bird has been removed, a determination should be made as to how it got in and the likelihood of a reoccurrence, and an action plan should be created to prevent further incursions.

Q. What other best practices would you recommend for bird control at food and beverage plants?

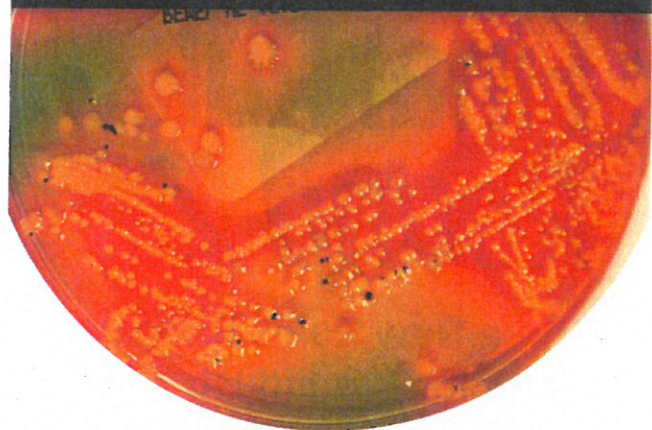
Hottel: Bird-proofing design should be a consideration when building, remodeling, or selecting a facility for food processing. It is far better to prevent birds than have to deal with them later. Site selection also can impact bird populations, and a review of neighboring properties and the impact they may have on the facility's bird problems should be determined.

McNeely: When dealing with situations arising from nuisance birds, one should always keep in mind the old saying: "An ounce of prevention is worth a pound of cure." The time, effort, and expense of installing bird deterrent or exclusion devices will be minimal compared to a potential product-contamination claim or plant production shutdown due to bird presence in the facility.

Rowley: With the possible contamination risks, increasing scrutiny from auditors, and new FSMA standards, bird activity at food and beverage facilities should not be tolerated. There is less potential for contamination and brand damage if bird control is addressed as preventive and proactive control, rather than waiting until an audit or customer inspection is failed, or an active infestation is established. The same standards of IPM for insect and rodent pests apply to bird control. Elimination of food, water, and harborage resources will go a long way to minimizing the impact of bird activity. ☞

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