



HOW AND WHY TO PEST PROOF YOUR FACILITY IN SPRING

The effects of temperature changes on structures can be significant with the variations between cold and warmth causing structures to expand and contract. Just as potholes in the road tend to become more pronounced in the spring, so, too, can warming weather bring evidence of facility cracks and gaps that worsened over the winter. Not only is this detrimental to the structure of the facility, it can increase the potential of pest entry.

A structural crack or gap as small as 1/50 inch can enable an ant to enter your facility and a house fly can buzz in through 1/12 inch. If a small gap is not repaired and allowed to get worse, it could become an open door for a young mouse (at 1/5 inch), a rat (at 1/3 inch), or even a pigeon (at 1-1/2 inch).

In virtually all areas of the U.S., these and other pests become more numerous in the spring making it an excellent time to inspect your facility and take steps in pest proofing - on both the exterior and interior.



Structural cracks and gaps can be an open invitation to pests.



Pest Entry Points

Well-sealed buildings are less attractive to pests, as fewer entry points - and hiding places - are available. Following are the opening sizes through which various pests can enter.

PEST	OPENING MUST BE LESS THAN
Pigeon	1.5 inch
Sparrow	4/5 inch
Rat - young	1/3 inch
Mouse - adult	2/5 inch
Mouse - young	1/5 inch
German cockroach - adult	1/16 inch
German cockroach - 1st instar nymph	1/16 inch
House Fly	1/12 inch
Mosquito	1/20 inch
Pharaoh Ant	1/50 inch

Source: Ecolab. *Pest Free Sanitary Design Checklist*, 2016

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EXTERIOR PEST PROOFING

Walk the outside of the property and inspect the facility for cracks, holes, and gaps around doors and windows. Look at any vegetation that is close to the building and any pest-conducive conditions around the property.

9 Steps for Exterior Pest Proofing

- 1 Reduce pest attraction by ensuring there is a vegetation-free barrier around the structure; removing plants (or weeds) growing against the building, and replacing organic mulch with inorganic rock or stone.
- 2 Reduce pest entry by cutting back trees or bushes that touch the building. Bushes should be trimmed back to at least 18 inches away, trees branches to 30 feet away. Plant life touching a structure is a direct path for insects to gain access inside.
- 3 Add a 3.5-foot band of hard glossy paint, or polished metal, to the bottom of external brick walls to deter rodent climbing.
- 4 Look at expansion joints around the perimeter; ensure they are sealed with the pest-resistant filler.
- 5 "Spring clean" the property - removing unused items or equipment to prevent birds from loafing.
- 6 Check dumpster drains; clean any debris so waste water flows freely.
- 7 Inspect the roof for pooling water. Not only can this lead to roof leaks, it can provide birds with easy-access drinking water.
- 8 In the same vein, check the parking lot for potholes; have these filled so they don't hold water for pests.
- 9 During the winter, dock doors can take a punishment; check these to ensure that the bumper pads are still forming a tight fit when the trailer backs up.



INTERIOR PEST PROOFING

Sealing openings around pipes and lines can keep rodents out of the facility, however, new studies are showing that this is not very effective against cockroaches, and it can actually be detrimental. This is because building or maintenance staff who seals the gaps may not have the knowledge of pest habits needed, leaving the openings accessible to cockroaches while removing access for treatment. Additionally, the practice is very labor intensive, so it is best to discuss options with your pest management provider prior to sealing these areas.

Employee communication can also be considered a form of "internal" pest proofing in that all workers need to be aware of their role in keeping the facility clean, closing doors against pest entry, and informing a supervisor of or logging any pest sightings or evidence.

9 Steps for Interior Pest Proofing

Doors, windows and foundations are common pest entry points. To help keep pests out:

- 1 Ensure all doors have automatic closures.
- 2 Protect door casings with sheet metal to prevent rodent gnawing and entry.
- 3 Seal hollow metal doors with spot welding.
- 4 Use double doors where flying insects are pervasive and air doors (of at least 1600 feet/min velocity) or plastic curtains in delivery entryways.
- 5 Ensure windows fit properly, and caulk any cracks or gaps around them.
- 6 Use screening of at least 18-inch mesh on windows and reinforce it at stress points.
- 7 Patch foundation cracks or holes with cement. If needed for temporary exclusion, steel wool can be tightly plugged into gaps until permanent repairs can be made.
- 8 Identify items that have become clutter and are no longer used. Make plans to sell or discard these.
- 9 Spring is also a great time to refresh employee signage such as "Keep doors closed" and "Throw trash in the trash canisters" in eating areas.

By pest proofing your facility to keep pests out, you'll have half the battle already won. Most importantly, proper housekeeping and sanitation practices should always be followed, to help prevent conditions conducive to pests.



TRAINING

TRAINING PARTNERSHIPS PROVIDE BEST OF ALL WORLDS

Pest management is a critical component of any food facility's food safety program. An effective program requires a partnership between the facility and the pest management provider, and worker knowledge and understanding of the role they play.

Training is in no way new for the food industry, and has often been conducted internally. But training has become more important and complex due to the increased food safety regulation and recordkeeping provisions of the Food Safety Modernization Act (FSMA), customer requirements and standards, and consumer demand for transparency. An effective training program necessitates a time commitment and expertise much greater than in the past. When paired with the food industry's typically high turnover rate of sanitation employees, the value of outsourcing training to those with both subject and training expertise becomes clear - particularly in areas such as pest management which is now considered a preventive control by FDA.

Who better to provide effective and efficient training to your workers than your pest management provider's training experts? A fully integrated training program,



such as the one developed through the [partnership Ecolab has formed with Alchemy](#), provides a premium library of training courses on sanitation, pest management and chemical safety. Participants learn how to identify signs of pests, how pests enter facilities, the problems they cause, preventive controls that will reduce pest attraction, and chemical and product safety.

An effective training program will benefit your company by enabling faster onboarding of new employees; consistency in re-training; increasing worker productivity; and reducing food safety and worker safety issues.

Additionally, working with a trusted partner can help you lower operating costs by allowing the flexibility of training during downtime, provide you with defensible records to help you meet GFSI, FSMA, and OSHA standards, and complement and reinforce the service of your pest management provider.

Worker training and education is a critical component of today's food safety, for which a training partnership can provide a food facility with the best of all worlds.

FSMA's Import Rule Due Soon

With the vast array of rules and compliance dates for FSMA, it can be difficult to keep track of them all. But one is coming due soon, of which all importers should be aware.

Although there is variance in the compliance dates for importers who are subject to FSMA's [Foreign Supplier Verification Programs \(FSVP\) rule](#) based on importer size, nature and subjectivity to the Preventive Controls (PC) or Produce Safety (PS) rules, anyone who imports food should check their facility against the following upcoming compliance dates.

On May 30, 2017, compliance is due for FSVP importers:

- Whose foreign supplier is not subject to the PC or PS rules, except small businesses (due March 19, 2018) and very small businesses, qualified facilities, and suppliers subject to the pasteurized milk ordinance (March 18, 2019).
- Of animal food whose foreign supplier is subject to the PC rule's GMPs, except small businesses (March 19, 2018) and very small businesses and other qualified facilities (March 18, 2019).

On July 26, 2017, compliance is due for FSVP importers:

- Whose foreign supplier is subject to the PS sprout requirements, except small businesses (July 26, 2018) and very small businesses (July 29, 2019)

All other FSVP importers have until at least March 2018 to comply with the rule.

However, if an importer is, itself, subject to the supply-chain program requirements in either PC rule, its FSVP compliance date for FSVP is the later of the above or that by which compliance is due for the PC supply-chain program provisions.

Did You Know...

- House sparrows have become so acclimated to humans they prefer to nest in manmade structures, such as eaves or walls of buildings, instead of in natural nest sites, such as holes in trees. ([Cornell Lab of Ornithology](#))
- Rats have excellent memories. Studies have shown that once a rat finds a path to food, it remembers it, even if something is put into or taken from the path to try to divert it. Researchers suspect that the rats use large spatial cues such as doors and windows to set their route. ([Indiana University](#))
- It is the 360-degree-vision, compound eyes of flying insects that enable them to evade fly swatters. But recent studies also have shown that it is the extra three simple eyes (ocelli) on their "foreheads" by which flying insects distinguish the horizon, enabling them to keep their bearings when flying upside down or sideways. ([Phys.org/Live Science](#))
- It has been estimated that 10 quadrillion ants live on the planet at any given time. That's about 1.4 million ants per human. ([Live Science](#))

ASK THE PEST EXPERT



Question: We recently had a third-party audit on which the auditor deducted points for using rodenticide more than 100 feet from a structure. The rodenticide was in rodent stations surrounding some portable trailers, which are more than 100 feet from the main building and are used to store saleable product. The auditor said the trailers are not considered to be structures. Was the auditor right in deducting points?

Answer: No. The auditor should not have deducted points. We contacted the EPA, and asked for their definition of "structure." Their response was: "The EPA does not precisely define the term structure, as used on rodenticide product labels, or maintain a list of them. There are simply too many possibilities to capture them all. With that said, the portable storage units and trailers you described would be considered structures, as would other structures that might attract rodents." When the facility informed the auditor of our response from the EPA, the auditor returned the deducted points. A facility has every right to challenge auditors. Your pest management provider can help resolve such issues with the various audit agencies.

About the Expert



John Barcay, Ph.D.
Ecolab Senior Staff
Scientist and Urban Entomologist

Dr. Barcay is a member of the National Pest Management Association, Entomological Society of America, American Mosquito Control Association, Gamma Sigma Delta (the honor society of agriculture), Society for Vector Ecology and Pi Chi Omega, a professional fraternity for urban pest control, and Independent Organic Inspectors Association.

Dr. Barcay received his bachelor's degree in entomology from Colorado University. He also received his master's degree and doctorate in urban entomology from Colorado University.

To submit questions to Dr. Barcay, [email here](#).

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ECOLAB PEST ELIMINATION

370 WABASHA STREET NORTH
ST. PAUL, MN 55102
1 800 325 1671 WWW.ECOLAB.COM/PEST

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