

THE MONITOR

BECAUSE PEST PREVENTION MATTERS TO FOOD SAFETY

SPRING 2015

IDENTIFYING THE UNIDENTIFIABLE

What's *That* in My Food?

If a consumer contacts you about a foreign object found in your food product, they could also be telling the world on Facebook, Twitter, YouTube, or the evening news - and word can spread at unprecedented speeds.

All too often, a natural element of the food is misidentified as a pest or other foreign object, leading to a consumer's claim of illness, demand for compensation, or even an investigation which could lead to a product recall. To protect your brand, it is important to react quickly to such consumer inquiries - with accurate identification and response.

It is in those cases that the scientists in Ecolab's Research, Development & Engineering (RD&E) facility are a significant benefit to Ecolab customers. "The identification of a pest or foreign object in a food product or plant environment can be very difficult, and it is important to have an accurate ID," said Entomologist Alicia Thuis. "When you need a quick answer for an upcoming audit or customer response, having access to Ecolab's unique RD&E service enables precise identification."

"In cases where the specimen is unidentifiable with the naked eye, we use magnification to look at its microstructure or work with our analytical group for diagnostic identification," said Senior Scientist Dr. John Barcay.

Once the specimen is identified, a report is provided to the customer, which includes a photo and detailed identification of the specimen, along with any recommendations for corrective action.



Alicia Thuis, Entomologist at Ecolab inspects a specimen that was submitted from a food production plant.

Top Reasons Ecolab RD&E Receives a Specimen:

- An unusual occasional invader, that is not a food pest, has flown or crawled in from outside.
- The Ecolab Service Specialist believes he/she knows what the insect is, but needs confirmation for precise treatment or documentation for customer's files.
- The specimen looks like an insect, but may actually be a foreign object of other origin, requiring special equipment for accurate identification.

CONTINUED ON PAGE 2

YOUR LANDSCAPE DESIGN CAN DETER NUISANCE PESTS

Bugs that populate the outdoors during the spring and summer can invade your building and cause contamination. Thus, landscaping your property for sanitation and pest prevention is key to keeping insects and other nuisance pests away from your facility.

Use these tips when planning your landscaping:

- Keep perimeter foliage at least 18" from the building and no taller than 24".
- Ensure trees are at least 30 feet from building perimeter.
- Use garden stones or sparse live plants for ground cover; do not use pine straw or thatched grass.

Some types of plants naturally attract pests. Avoid the following plants to help keep related pests away.



TREES TO AVOID

Boxelders

Boxelder bugs

Fruit/Nut

Rodents, birds, bees

Crabapple

Bees, yellowjackets

Chinese/Siberian Elm

Elm leaf beetles

Crepe Myrtle, Dogwood

Dermestid beetles



SHRUBS & FLOWERS TO AVOID

Spirea, Buckwheat Daisy, Wild Aster, Ceanothus, Pyracantha

Dermestid beetles

Japanese Andromeda

Birch catkin bugs

Azaleas, Rhododendrons, Yews

Birch catkin bugs, black vine/strawberry root weevils

IDENTIFYING THE UNIDENTIFIABLE - WHAT'S *THAT* IN MY FOOD?

CONTINUED FROM COVER >>>

Valuable Insect Identification

A few situations in which Ecolab RD&E has provided significant customer value include:

Tortilla Cockroach?

A purchaser found an insect, thought to be a cockroach, in the trailer of a tortilla shipment. With the purchaser preparing to refuse the shipment for fear of a health concern, a photo of the insect was submitted to Ecolab RD&E. It was identified as a camel cricket - an occasional invader that had entered the trailer from outdoors and was not a threat to contaminate the food shipment. The purchaser was able to accept the shipment, saving the tortilla producer \$40,000 and protecting its brand image.



Sweet Potato Maggots?

A consumer returned a baked sweet potato demanding compensation because, she claimed, it had been infested with live maggots and made her and her husband sick. When the potato was sent to Ecolab RD&E, the "maggot" was found to be a young plant shoot with leaves and roots. A detailed report was provided to the consumer and the situation was diffused.

Audit Moths?

Shortly before a food processor's audit, small moths were found on the glue board of a Stealth® Maxima™ - Ecolab's proprietary fly light. It was certain they were not Indian meal moths, a common stored product pest which could result on a point deduction on the audit. A photo of the moths was sent to Ecolab's RD&E team who identified the insect as a many-plumed moth - a seasonal, occasional invader that breeds outdoors and does not infest stored food products or structures. It was the processor's first audit and the identification greatly relieved their concerns.



PEST OF THE QUARTER

ANTS

Ants can be a major concern to food and beverage processing plants. They are tiny enough to get into a structure through the smallest of cracks, and once inside, will seek out food and sometimes nesting sites. Their presence can contaminate foods and food-contact surfaces and can cause audit or inspection failures, fines, or even plant shutdown.

Among the most common and problematic ants in food or beverage plants are:

Found throughout the U.S.



PHARAOH ANT

- 1/16" long with a pale, yellowish to reddish body and darker abdomen.
- Nests inside warm, humid areas near food and water sources.
- It's difficult to find their nests, which are built in wall voids and behind baseboards.



THIEF ANT

- 1/16" long, pale yellowish to dark brown.
- Nests near other ant species and robs them of food and brood; inside crevices.
- Structures in hot weather, foraging in trails and seeking high-protein foods and sweets.



ODOROUS HOUSE ANT

- 1/16" - 1/8" long, brown to black in color.
- Nests near moisture sources such as voids near hot water pipes and around sinks.
- Colonies have multiple queens and it emits a rotten odor when crushed.

Found in Eastern U.S. and West Coast



PAVEMENT ANT

- 1/16" - 1/8" long, light brown to black with paler leg.
- Nests in pavement cracks; inside walls and insulation, under floors and slabs near heat.
- Reproductive swarmers can emerge anytime inside; bites and stings when provoked.

Found in southern states



FIRE ANT

- 1/16" - 1/8" long with a yellowish-red head and thorax and black abdomen.
- Nests outdoors with multiple queens in agricultural plantings and livestock farms.
- Inflicts painful bites and stings. Costs the U.S. billions of dollars annually in damage and control.

Found in southern states; indoors in northern states



CRAZY ANT

(ALSO NEW, EXOTIC RASBERRY AND TAWNY SPECIES)

- 1/16" - 1/8" long, slender, dark brown to black with gray sheen.
- Nests inside beneath floors, in plants, wall voids; outside in mulch beds.
- Workers forage up to 100 feet from nest (moving in an erratic way.) Eats a variety of foods.

Found in southern states, California, East Coast



ARGENTINE ANT

- 1/16" long, light to dark brown.
- Nests are large with hundreds of queens in a vast array of locations.
- Can invade in large numbers; trails branches and utility lines/wires for entry. Can bite.

ECOLAB PEST ELIMINATION

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Did You Know...

- Winged, flying ants can be a common site in the spring when populations are seeking to reproduce. No matter what species of ant it is, if it has wings, it is a reproductive ant that is seeking a mate. But if that winged insect is a carpenter ant or a termite (which is not an ant at all), it can be indicative of an infestation which can cause extensive damage.
- Termites eat the wood in which they nest. Carpenter ants excavate the wood, but do not eat it. Thus, piles of frass and bits of wood at a nest opening can be indicative of carpenter ants.
- If a single ant finds its way into your facility and finds food, it will lay down a scent trail as it returns to its nest. This enables all the other worker ants of the colony to follow the trail into your facility to the food.



Winged Ant

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In the spring, ants become increasingly active ... foraging for food, mating, expanding and starting new colonies. As a result, ant species can spread, impacting the environment and businesses they invade. The impact is felt from both exotic species entering the U.S. and species that spread state by state.

Two species spreading across the south are fire ants and crazy ants.

- Fire ants move and expand their colonies significantly in the spring, particularly after heavy rains that saturate the soil beneath their mounds. A rainy period followed by a warm, sunny day will also trigger mating activity, resulting in new colonies.
- The spread of crazy ants is displacing arthropods and fire ants - which may seem like a good thing except that it impacts the ecosystem by reducing food for native birds. Additionally, while fire ants will bite if disturbed, crazy ants aggressively invade and nest in any cavity - including that of electrical equipment which could cause millions of dollars of damage.

IN THIS ISSUE:

Cover: Identifying the Unidentifiable

Page 2: Your Landscape Design Can Deter Nuisance Pests

Page 3: Pest of the Quarter: Ants

Back Page: Springtime Means Ants!

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