

Pest Ant Eradication an Innovative Approach



Information for the Lawn & Garden Market

(No Audio)

Introduction-1

- Ants were among the earliest social insect and go back @ 80 million years
- Make up over half the animal Biomass on earth
- About 55 species are pests
- Only 8-10 Economically important species in a geographic area

Introduction-2

- Most important pest ants share biological and behavioral characteristics
- Transported into new ecosystems by human activity
- Most can have several “Queens”, colonies can share workers and get very large
- They are aggressive and displace native ants

Objective

- To help you to understand how a pest ant's biology and behavior can be used to design a plan for control or elimination of the colony without causing harm to people, plants, pets and beneficial insects in the environment.

Customer Requirements



- Least Toxic approach to effective ant control
- Easy to implement
- Cost Effective applications

Assessing The Problem 1



- The treatment should be tailored to fit the problem
- Identify the Pest Ant and take advantage of its behaviors to enhance control
- Major Pest Ants by Region

Assessing the Problem 2

- The most commonly found pest ants by region are:
 - New England- Carpenter Ant, Pavement Ant
 - Atlantic Seaboard- Carpenter Ant, Odorous House ant, Pavement Ant, Cornfield Ant
 - Southeast- Carpenter Ant, Argentine Ant, Imported Fire Ant, Pharaoh Ant
 - Florida- Imported Fire Ant, Ghost Ant, Crazy Ant, Pharaoh Ant, White-footed Ant, Big Headed Ant, Carpenter Ant

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Assessing the Problem 3

- The most commonly found pest ants by region are:
 - Midwest- Carpenter Ant, Pavement Ant, Odorous House Ant
 - Midsouth- Odorous House ant, Imported Fire Ant, Acrobat Ant, Little Black Ant, Carpenter Ant
 - Texas- Imported Fire Ant, Carpenter Ant, Crazy Ant, Pharaoh Ant, Argentine Ant, Odorous House Ant, Acrobat Ant, Little Black Ant
 - Southwest-, Crazy Ant, Argentine Ant, Carpenter Ant, Harvester Ant

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Assessing the Problem 4

- The most commonly found pest ants by region are:
 - California- Argentine Ant, Carpenter Ant, Imported Fire Ant,
Pharaoh Ant, Odorous House Ant, Velvety Tree Ant
 - Northwest- Carpenter Ant, Odorous House ant,
“moisture” ant
 - Hawaii- White-footed Ant, Pharaoh Ant, Ghost Ant,
Carpenter Ant, Bigheaded Ant

Meet the Pest Ants

- Carpenter Ant
 - Large Black, or Black and Red Ant
 - One Queen in nest outside of structure
 - Several satellite colonies connected to main colony



Meet the Pest Ants

- Argentine Ant-
 - Small Black Ant
 - Many Queens in nest outside of structure
 - Many satellite colonies connected to main colony
 - Super-Colony may number in the millions of members
 - Workers are shared throughout the Super-colony



Meet the Pest Ants

- Odorous House Ant
 - Small black Ant
 - Live in shallow nests in soil
 - May nest in various habitats including wooded areas, beaches, wall voids, and around water pipes and heaters
 - Large colonies, with up to 10,000 workers and many queens



Meet the Pest Ants

- Pharaoh Ant
 - Small Light Brown Ant
 - Colony can have several dozen to several thousand workers
 - Colony can bud easily and form many satellite nests
 - May nest exclusively indoors



Meet the Pest Ants

- Big Headed Ant
 - Small light brown to black
 - Major workers have a very big head
 - May have multiple queens and several thousand to hundreds of thousands of workers
 - May build tunnels or bring sand and dirt into the house



Meet the Pest Ants

- Red Imported Fire Ant
 - Red to brown with a black abdomen 1/8 to 1/4 inch long
 - May have multiple queens and several thousand to several million workers
 - Nest outdoors and may build interconnected Super colonies
 - Can inflict a painful sting



Meet the Pest Ants

- Pavement Ant
 - Dark Brown to Black 3/16 inch
 - Nests in lawn or mulch located near sidewalks
 - Generally found near water
 - Usually only one functional queen per nest



Food Sources for Pest Ants

- Natural
 - Plant nectar
 - Pollen and seeds
 - Honeydew from aphids, scales, and mealy bugs
 - Fungus
 - Other insects
 - Animal excretions
 - Decaying animals



Common Traits of Pest Ants 1

- Common behaviors :
 1. A single ant does not think, it only reacts to stimuli in its environment
 2. Ants rely on pheromone trails for foraging
 3. Only a small portion of colony (workers) forage for food
 4. Most ants in the colony work at maintaining the nest, feeding the larvae and queen(s)
 5. When food is located, workers are recruited to exploit food source
 6. Larger food sources elicit a larger response

Common Traits of Pest Ants 2

- Common behaviors (continued):
 7. The colony's nutritional preferences may vary by season, stage of colony development, or ease of acquisition, but most of the time these ants will accept a liquid bait that is similar to the "Honeydew" produced by Aphids, Scales and Mealy bugs
 8. Ants are territorial and will keep less aggressive species out of their feeding areas
 9. Often have multiple queens and sub-colonies connected to the main colony that share workers
 10. If Sub-colonies are cut off, they can survive and create additional colonies (budding)

Common Traits of Pest Ants 3

- Common behaviors (continued):
 11. Pest ants are often brought into disturbed sites by human activity (construction, landscaping, commerce, etc.)
 12. Foraging behavior can be altered by repellent or irritating chemical odors
 13. Ants will explore an area randomly until a food source is found. They will then return to the colony using straight lines in the environment. They mark this trail with pheromones for other workers to follow

Common Traits of Pest Ants 4

- Common behaviors (continued):
 14. Most foragers cannot digest large particles of food and must bring these back to the colony to be digested by the larvae and will then feed on a liquid excretion
 15. Foragers can take nourishment from liquid and gel food sources they encounter

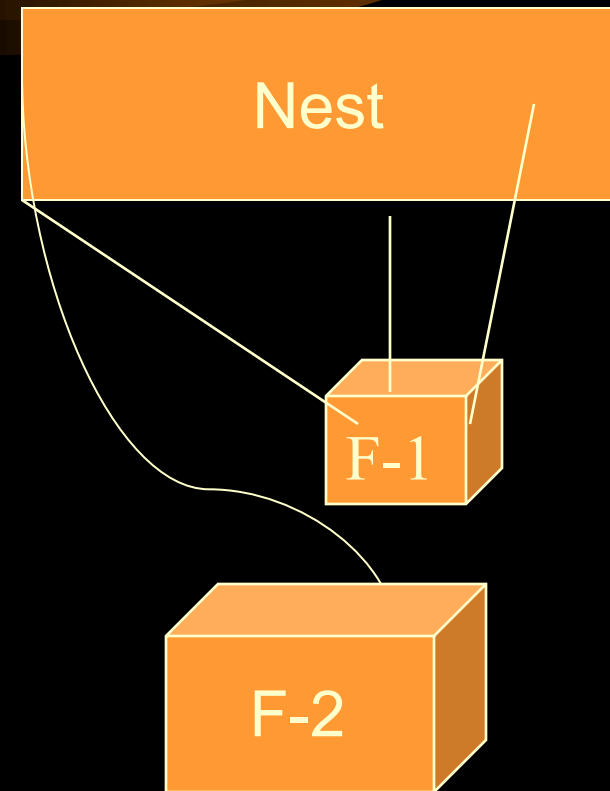
Common Traits of Pest Ants 5

- Common behaviors (continued):

16. During feeding experiments on argentine ants

- Liquids of equivalent nutritional value were preferred over gel baits
- Ants fed 5 times faster and ingested 4 times as much bait when feeding on a liquid bait, when compared to a gel bait

17. Given equivalent food sources, foragers will recruit workers to the source closest to the nest



Assessing The Problem 1



- The treatment should be tailored to fit the problem
- Ant infestations can generally be classified as Small, Moderate and Large and Very Large

Small Infestations

- Usually only a few to a few dozen foragers are seen
- Most commonly associated with Pharaoh or Crazy Ants
- Use Gel Baits or Liquid Baits in Ant Café Bait Stations



Moderate Infestation

- Usually a few dozen to a few hundred foragers are seen
- Most commonly associated with Carpenter Ants, Pharaoh & Big Headed Ants
- May require several to many placements of gel or liquid baits in Ant Café or Ant & Roach Cafe RTU bait stations



Large Infestations

- Usually hundreds or thousands of foragers are seen
- Most commonly associated with Argentine, White-footed, Odorous House, Red Imported Fire Ants
- May require extensive use of Antopia or large volume liquid bait placements with AntPro bait station



Very Large Infestations

- Usually thousands of foragers are seen
- Most commonly associated with Argentine, White-footed, Odorous House, Red Imported Fire Ants
- May require perimeter treatment with non repellent residual liquid, such as Termidor and extensive use of Antopia or large volume liquid bait placements with AntPro bait station to attract ants into “kill zone” while spray is fresh



Tools of the Trade 1

- Environmental Modification
 - Trim trees and shrubs away from the structure
 - Dry up moisture sources
 - Remove leaf litter from gutters,
 - Move downspouts to drain several feet away from house
 - Fix leaky hose bibs
 - Replace rotting wood
 - Move firewood and other storage that might provide a nesting site away from house exterior
 - Caulk any potential entranceways into the structure

Tools of the Trade 2



- Environmental Modification
 - Replace plants that are prone to attack by aphids and scales or that produce sweet nectars that could attract ants
 - Treat plants that are susceptible to insect attack regularly with appropriate pesticides
 - Remove mulch from areas immediately around structure

Tools of the Trade 3



- Ant Baits - Basics

- To Eliminate a colony, ant baits must:

- Be attractive to the target ant
 - Be available in sufficient quantity
 - Be available for a sufficient length of time
 - Work slowly, to allow the toxicant to effect the ability of the colony to sustain itself
 - By sterilizing or killing the queen(s)
 - By causing a precipitous fall in workers that gather food and maintain the colony

Tools of the Trade 4

- Ant Baits

- Liquids, Gels, Granules- which to use where

- Liquids are the easiest for ants to pick up and carry back to the nest
- Gels are next easiest for ants to pick up and carry back to the nest
- Granules are the most difficult to utilize as they must be brought back to the nest to be digested by the larvae

Feeding Preferences

Liquid

Gel

Granule

Solid

Most Preferred Food Source

Least Preferred food source



Tools of the Trade 5

- Gourmet Ant Bait Gel

- Benefits

- Ready to Use 6% Disodium Octaborate Tetrahydrate for proven effectiveness
- “Unitract” attracts a wider variety of ants than simple sugar based baits
- Heat Stable formulation stays a gel even in summer heat



Tools of the Trade 6

- Gourmet Ant Bait - Liquid
 - Ready to Use 1% Disodium Octaborate Tetrahydrate for proven effectiveness
 - Can be Diluted to .5% for cost savings or enhanced bait acceptance
 - “Unitract” attracts a wider variety of ants than simple sugar based baits
 - Preservatives keep bait from molding for up to 6 months even when diluted



Tools of the Trade 7

- Bait stations should:
 - Be versatile, so that it can be used in different situations
 - Be easy for the ant to enter & exit
 - Protect the bait from drying out (limiting air flow)
 - Keep the bait from being contaminated or washed away
 - Keep the bait from contaminating the surrounding area
 - Lock securely to prevent tampering
 - Be easy to secure and move
 - Be easy to clean & reuse
 - Constructed of materials that are strong & weather resistant

Tools of the Trade 8

- Ant Café Bait Stations
 - Ant Cafés can be used To locate the nest
 - Use Ant Cafés in several sites with different types of bait (protein, fat, & carbohydrate) to determine feeding preferences
 - Set up multiple feeding sites then follow the feeding trails back to the nest
 - Small bait placements can be used for control in species with small colonies



Tools of the Trade 9

- Antopia Bait Stations
 - Hold 7 to 14 ounces of Gourmet Ant Bait liquid
 - They are inexpensive, spill resistant, easy to clean and refillable.



Tools of the Trade 9

- Ant Pro Bait Stations
 - Hold up to 20 ounces of Gourmet Ant Bait liquid
 - They are durable and keep liquid ant baits fresh for up to 6 months



How To Bait Successfully 1

1. Keep baits fresh
2. Keep sufficient bait available
3. Keep bait stations free of odors & contamination
4. Start with location baiting use a variety of baits in small amounts
 - The type of food carrier a bait uses can make a difference
 - Feeding preferences may change. Have carbohydrate, protein and fat based bait available
5. Place & move baits to areas of highest activity

How To Bait Successfully 2

7. If baits seemed to have worked temporarily, original target pest may have been replaced by another species with different food preferences
8. Place baits as close to the nest as possible (determine through location baiting)
9. Bait outside of structure whenever possible
10. Locate baits along straight lines in the environment “Structural Guidelines”

Placing Bait Stations 1

1. Residential and Commercial

- Most baiting for ants should be outside of structures
 - Bait as close to the nest as possible
 - Look for nesting sites like; dead trees, landscaping timbers, rock walls, mulch beds and moisture sources
- Ants prefer large, nutrient rich food sources and many ant species will travel 150ft to 200 ft, so for ants such as Argentine, Odorous House and White footed use AntPro Bait stations
- Locate baits around the exterior of structures near where ants are seen to be trailing

Placing Bait Stations 2

2. Agriculture-

- Initially-set up a uniform grid in the grove or field
 - Depending on the species to be controlled, place bait stations uniformly at 70 ft to 80 ft interval
 - Place extra bait stations in areas of heaviest activity and near permanent moisture sources or wood lots
- After initial control is achieved, remove interior bait placements
 - Continue to monitor and maintain bait placements around the perimeter

Key Benefits



- Using Baits to treat for ants takes advantage of normal ant behavior to eliminate the colony
- Gourmet Ant Baits work on a wide variety of pest ants
- Using baits instead of sprays is good for the environment
- Bait stations keep baits available for extended periods of time and protect people plants and pets

Next Steps

- Order your Ant Baits and Bait Stations Now!
- For additional information and a dealer near you visit our website at www.antcafe.com
- Distributors can order our products by calling 877-483-4997