# AN INNOVATIVE APPROACH TO THE CONTROL OF TRAMP ANTS

Because You Care
About the Planet We Share





### We believe that...

 the most beneficial way to do pest control is with the least environmental impact possible.





 targeting pests while avoiding their natural enemies.





 using the least toxic products and methods available.





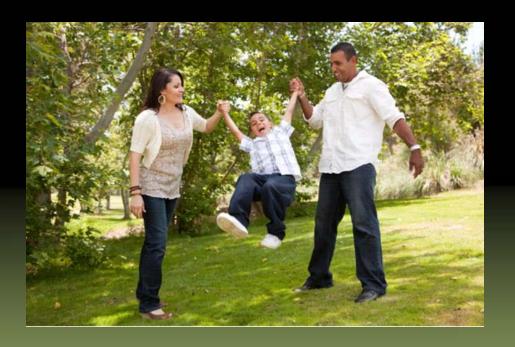
 using insects' natural behaviors to enhance effective pest control.







 minimizing human and non-target animal exposure to chemicals whenever practical.





 avoiding putting chemicals into the air or groundwater.





#### We believe that...

 using baits is safer, more effective and more environmentally friendly than using pesticides, like organophosphates or synthetic pyrethroids.



Environmentally Friendly Pest Control Products for the 21<sup>st</sup> Century



# What's wrong with current treatments?

- Harmful to the environment
- Unsustainable
- Unintended exposure
  - People
  - Pets
  - Non-target insects and other animals



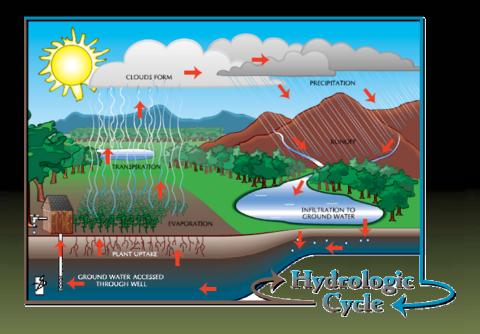


# Environment

 Potable water will become increasingly scarce and valuable.

Pollution of our drinking water will become

a top concern.





Water availability will be impacted by:

- Overpopulation
- Global warming
- Expanding deserts
- Melting glaciers
- Aquifers being consumed
- Saltwater intrusion into well fields
- Contamination of drinking water supplies





# Ants

If you think ants are getting worse each year...

1 2 3 4 5 6  1 7 8 10 121 121 123  14 15 16 17 18 19 20  14 15 16 17 18 19 20  15 12 23 24 25 25 27  15 20 20 20 20  1 2 3 4 5 6  1 3 3 4 5 6  1 3 3 4 5 6  1 4 3 4 5 6  1 5 3 4 5 6  1 5 3 5 6  1 5 3 5 6  1 5 3 5 6  1 5 3 5 7  1 5 3 5	1 7 8 2 5 6 7 8 9 10 10 12 13 9 5 6 17 10 9 20 21 22 23 24 25 25 27 28 29 August M TW T F S S 1 2 2 4 5 6 7 8 9 13 10 12 3 9 45 9 17	1 2 3 4 8 6 7 8 8 90 11 20 13 4 15 16 7 8 8 90 21 20 22 22 22 23 24 25 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	1 2 3 4 5 6 1 8 10 11 12 13 14 15 15 17 16 40 30 21 22 23 24 25 26 27 20 29 30 October M TW T F 5 5 6 3 6 9 10 11 11 11 10 10 10 10 10 10 10 10 10	12 13 M 15 15 17 16 19 20 21 23 33 42 26 27 28 28 30 31 November M T W T F 5 5 1 2 2 4 5 6 7 8 9 15 11 2 3 16 15 8	2 3 4 8 8 7 1 8 12 13 14 1 15 11 15
1 2 3 4 5 6 1 2 8 10 12 11 12 13 4 15 6 17 18 18 20 4 15 6 17 18 18 20 10 12 12 12 12 12 12 12 12 10 12 12 12 12 12 12 10 12 12 12 12 12 10 12 12 12 12 12 10 12 12 12 10 12 12 12 10 1	1 7 8 8 19 19 19 19 19 19 19 19 19 19 19 19 19	1 2 3 4 8 6 7 8 8 90 11 20 13 4 15 16 7 8 8 90 21 20 22 22 22 23 24 25 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	1 7 3 4 8 8 7 8 8 9 11 12 13 14 15 15 17 18 9 20 21 22 23 24 25 26 27 26 29 30 24 25 26 27 26 29 30 26 26 26 26 26 26 26 26 26 26 26 26 26	1 2 3 4 5 6 7 6 10 11 12 13 4 5 6 7 7 8 10 11 11 12 13 4 5 6 7 7 8 16 27 23 24 25 25 24 25 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 27 28 26 26 26 26 26 26 26 26 26 26 26 26 26	2 3 4 8 8 7 1 8 12 13 14 1 15 11 15
# 15 % 17 18 % 20 % 27 % 27 % 28 % 27 % 28 % 27 % 28 % 27 % 28 % 27 % 28 % 27 % 28 % 28	# 12 19 4 50 617 # 15 19 12 12 12 12 # 25 12 12 12 12 # 24 12 12 12 12 # 24 12 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 12 12 # 25 12 # 25 12 12 #	September  MTWTFSS 1 2 4 5 0 7 18 18 18 18 18 18 18 18 18 18 18 18 18	44 15 15 17 18 49 30 21 22 23 24 25 26 27 26 29 30 27 26 29 30 27 26 29 30 27 27 28 29 29 29 29 29 29 29 29 29 29 29 29 29	12 13 14 15 15 17 16 19 20 21 22 23 34 25 26 27 28 28 30 31 11 11 11 11 11 11 11 11 11 11 11 11	8 10 11 12 13 14 16 16 17 16 19 20 20 20 20 20 20 20 20 20 20 20 20 20
31 22 23 24 25 26 27 25 25 20 27 25 25 20 27 25 25 25 27 25 25 25 25 25 25 25 25 25 25 25 25 25	9 9 22 21 22 24 25 28 27 28 29 28 27 28 29 28 28 27 28 29 28 28 28 28 28 28 28 28 28 28 28 28 28	F 16 16 20 21 22 22 22 23 28 25 26 27 28 28 28 28 28 28 28 28 28 28 28 28 28	21 22 20 24 25 26 27 26 29 30 20 30 30 30 30 30 30 30 30 30 30 30 30 30	November MTWTFSS 12 4 5 6 7 9 9 12 11 12 13 13 13 13	M 1T 10 10 20 21 21 22 22 24 25 26 27 28 2 20 27 28 2 20 27 28 2 20 27 28 2 20 27 28 2 20 20 27 20 27 20 27 20 27 20 27 20 27 20 27 20 27 27 27 27 27 27 27 27 27 27 27 27 27
July  MTWTF55  1 2 3 4 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 5 6  7 8 9 12 1 1 2 3 6  January  MTWTF5S  1 2 3 4  5 6 7 8 8 15 11	August M T W T F S S 1 2 2 3 3 3 1 1 2 3 4 5 5 1 7 1 8 1 2 2 2 2 2 3 4 5 5 1 7 1 8 2 2 2 2 2 3 4 5 5 2 2 2 3 2 3 3 3 5 5 6 5 7 2 8 2 3 3 3 3 3 5 6 5 6 5 7 2 8 2 3 3 3 3 3 5 6 5 6 5 7 2 8 3 5 3 3 5 5 6 5 7 2 8 3 5 5 7 2 8 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 5 5 7 2 8 5 7 2 8 5 7 2	September M T W T F S S 1 2 3 4 5 0 7 8 8 10 11 12 13 14 15 16 17 18 19 20 21 20 20 20 20 20 20 20 20 20	October M TW T F S S 1 2 3 4 5 6 7 8 9 10 11 12 12 14 15 10 17 18 19 20 21 22 22 24 25 20 27 28 29 30 31	November MTWTF55 12 3 4 5 6 7 8 9 12 11 12 13 14 15 8 17 18 9 20 21 22 22	22 24 25 26 27 28 2 26  December M T W T F S : 1 2 2 4 5 6 8 8 90 11 12 12 12 12 12 12 12 12 12 12 12 12
MTWTFSS 1 2 3 4 5 6 7 2 9 4 5 1 1 1 2 3 4 5 6 7 4 9 15 1 1 1 2 1 3 9 15 1 1 1 2 1 3 9 1 2 2 3 2 4 2 1 2 2 2 3 2 3 2 2 1 2 2 3 2 3 3 3 1   January  MTWTFSS 1 2 3 4 5 6 7 8 8 1 5 1 1	M T W T F S S 1 2 3 4 5 6 7 8 9 12 11 12 13 41 55 617 18 19 22 22 22 24 25 28 27 28 20 30 30  February	MTWTFSS 1 2 3 4 5 0 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 12 23 24 25 29 27 28 29 30	M TWTFSS 1 2 3 4 5 6 7 8 9 10 11 12 13 16 15 10 17 13 19 20 21 22 23 24 25 27 28 29 30 31	MTWTFSS 1 2 4 1 6 7 6 9 10 10 20 14 5 6 17 10 20 21 20 20	M TW T F S :
1 2 3 4 5 6 3 6 9 12 11 12 13 14 15 19 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 January MTWTFSS 1 2 3 4 5 6 7 8 8 15 11	1 2 3 4 5 6 7 8 9 13 11 12 13 14 15 10 17 18 16 22 12 22 23 25 28 27 28 20 30 30	1 2 3 4 5 6 7 8 8 10 11 12 13 14 15 16 17 18 19 22 21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 10 17 18 19 20 21 22 23 24 25 26 27 26 29 30 31	1 2 3 4 5 6 7 6 9 13 11 12 13 14 15 16 17 18 19 20 31 22 23	1 2 2 4 5 6 2 8 8 10 11 12 12 1 15 10 17 18 19 20 2 22 23 24 25 28 27 2
J 8 9 12 11 12 12 13 14 15 16 17 18 19 20 17 12 19 20 20 20 17 22 20 20 20 20 20 20 20 20 20 20 20 20	4 5 6 7 8 9 12 11 12 13 4 15 16 17 18 19 20 21 22 23 24 25 25 27 28 20 30 31	8 8 10 11 12 13 14 15 16 17 18 19 22 21 22 23 24 25 26 27 28 29 30	6 7 8 9 15 11 12 12 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	3 4 5 6 7 8 9 12 11 12 13 14 15 18 17 18 19 20 21 22 23	8 8 10 11 12 13 1 15 10 17 18 19 20 2 22 28 24 25 28 27 2
M 15 10 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 2 2 2 3 4 2 5 2 6 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7 2 7	11 12 13 14 15 10 17 18 18 28 27 22 28 24 25 28 27 28 29 30 30	5 16 17 18 19 20 27 20 28 28 28 27 28 29 30	10 16 15 16 17 16 19 20 21 22 23 24 25 26 27 28 29 30 31	12 11 12 13 14 15 16 17 18 18 18 12 22 22	15 10 17 18 19 20 2 22 20 24 25 28 27 2
January MTWTFSS	February	29 30	27 28 29 30 31		
MTWTFSS		20	09		
MTWTFSS					
MTWTFSS		March	April	May	June
5 6 7 8 8 10 11		MTWTFSS	MTWTFSS	MTWTFSS	MTWTFSS
		1	12343	1 2 2	1 2 3 4 5 8 7
	2 2 4 5 6 T 8 6 10 11 12 13 14 15	2 1 4 5 6 7 8 9 10 11 12 13 14 15	15 14 15 16 17 18 19	11 12 10 14 15 16 17	18 16 17 18 19 20 2
19 20 21 22 23 24 26	16 17 18 19 20 21 22	16 17 16 19 30 21 22	20 21 22 20 24 28 26	18 19 29 21 22 23 34	
26- 27- 26- 29- 30- 31	29 24 25 26 27 26	29 24 26 26 27 28 28 30 31	27 29 29 30	25 26 27 28 29 30 30	29 30
July	August	September	October	November	December
MTWTFSS		MTWTFSS	MTWTFSS	MTWTFSS	MIWIFSS
	1 4 5 8 7 0 9	7 6 9 10 11 12 13	5 6 7 6 9 10 11	2 2 4 5 6 7 0	1 2 3 4 5 6
13 14 15 16 17 10 19	10 11 12 13 14 15 15	14 15 16 17 19 19 29	12 13 14 15 16 17 10	9 12 11 12 13 14 15	14 15 10 17 18 19 2
20 21 22 22 24 25 20	17 10 19 20 21 22 23 26 20 28 27 28 20 30		19 20 21 22 23 34 25 26 27 28 28 20 31	15 17 18 19 30 31 32 33 34 39 36 37 38 39	21 22 24 25 26 2
	11			30	
		20	10		
January	February	March	April	May	June
		MTWTFSS			MTWTFS
	1 2 3 4 5 6 7	1 2 3 4 5 6 7	1 2 3 4	2456789	1 2 3 4 5 6
11 12 13 14 19 16 17	15 16 17 18 19 20 21	18 18 17 18 19 20 21	12 13 14 15 18 17 16	10 11 12 10 14 10 16	14 10 10 17 18 19 2
16 19 20 21 22 23 24 26 26 27 28 29 30 31	22 23 24 28 26 27 28	22 23 24 25 26 27 28 29 30 31	100 20 21 22 23 24 25 26 27 28 29 30	17 18 18 20 21 22 23 24 28 28 27 28 29 30	21 22 23 24 25 26 2 28 20 30
July	August	September	October	November	December
				MTWTFSS	
1234		12345	1.2.3	1234567	12345
5 6 7 6 9 10 11	2 3 4 5 6 T 6	6 7 8 8 10 11 12		0 9 10 11 12 15 14	8 7 6 9 10 11 1
© 13 14 15 18 17 16 19 20 21 22 23 24 25					
26 27 28 29 30 31	23 24 25 26 27 28 29	27 29 29 30	25 20 27 20 29 30 31	29.50	27 20 29 30 31
	30 In				



# You're probably right!

Native ants are being replaced by more aggressive invaders from other countries, and other areas of our country, due to increased trade and climate changes!

#### **Argentine Ant Nest**



Alex Wil



# Tramp Ants

- Ant colonies that used to be made up of a few hundred ants are being replaced by colonies with tens of thousands, or even millions of ants.
- These aggressive invaders are generally known as 'tramp ants' and are characterized by the following:
  - High mobility (rapid colonization)
  - No intra-specific aggression, leading to huge multi-queen colonies





#### **Current Treatments**

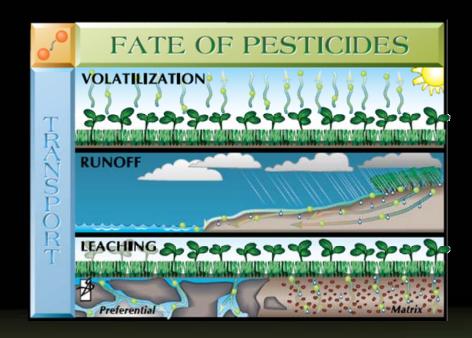
- Sprays and granules that only work where they are placed.
- Some sprays are repellent and can fracture a colony, turning a single nest into two or more nests.
- The 'Al' doesn't get to the queen(s), so the ants come back.





# **Current Treatments**

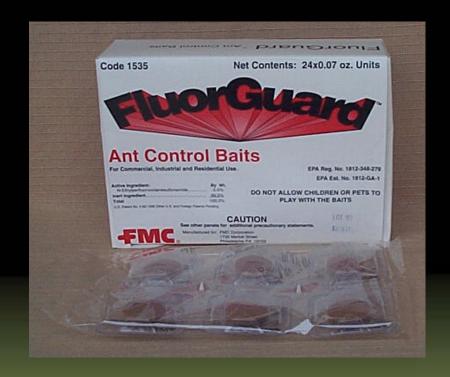
- Sprays and granules are either broken down by sun and rain or washed into the soil where they can get into the water system.
- When broken down, some chemicals are up to 10x more toxic!





## **Current Treatments**

Solid baits in small stations used to offer some indoor control, but the tiny amount of bait in them can't control the 'super colonies' that usually nest outside.





# Controlling Highly Aggressive Ants with 'Super Colonies'

- In developing our Innovative products, we carefully heeded the latest ant control research findings.
- Links to the full articles cited, herein, are available on our Web site at www.antcafe.com.



"Ant Trails: A Key to Management with Baits" by Klotz, Williams, Reid, Vail and Koehler

• Most tramp ant species use pheromone trails to mark a path between the colony and a food source. These trails often follow structural guidelines, and when trails are established to a permanent food source the efficiency of the food collection is significantly enhanced.



"Acceptance and Intake of Gel and Liquid Sucrose Compositions by Argentine Ants" by Silverman and Roulston

- Argentine ants feed more readily and effectively on liquid baits.
- We also learn that, given food sources of equivalent value, ants will choose foods closer to the nest.



"Toxicity and Repellency of Borate-Sucrose Water Baits to Argentine Ants" by Klotz, Greenberg, Amrhein and Rust

- Borates were shown to be effective at controlling Argentine ants, but needed to be used in a narrow range, between .5% and 1%.
- Concentrations above 1% caused a reduction in consumption.
- It can be inferred from this that it is important to control evaporation when using liquid borate baits.



"Oral Toxicity of Abamectin, Boric Acid, Fipronil, and Hydramethylnon to Laboratory Colonies of Argentine Ants" by Hooper-Bui and Rust

- In this research, it was demonstrated that many chemicals are effective at killing foragers, but that only some are 100% effective at killing the queen(s).
- In this case, Fipronil and Boric Acid indicated a 100% kill rate on the queen(s).



"Effects of Boric Acid, Fipronil, Hydramethylnon and Diflubenzuron Baits on Colonies of Ghost Ants" by Ulloa-Chacon and Jaramillo

In this research, a 100% mortality rate of queen was confirmed with Fipronil and Boric Acid in ghost ants, but not with Hydramethylnon and Diflubenzuron.



"Delayed Toxicity as a Critical Factor in the Efficacy of Aqueous Baits for Controlling Argentine Ants" by Rust, Reierson and Klotz

• In this research, the speed of action of the bait was identified as an important factor. The concentration of the AI in the bait could effect whether or not delayed toxicity occurred.



"Evaluation of Liquid Baits Against Field Populations of Longlegged Ants" by Kim-Fung Chong and Chow-Yang

" "Relative Attractiveness of Baits to Paratrechina longicornis" by Stanley and Robinson

These studies confirmed that many of the feeding behaviors noted in Argentine ants could be extrapolated to other 'tramp ant' species, and that Borates in liquid sucrose were effective for control.



"Testing Baits to Control Argentine Ants in Vineyards" by Daane, Cooper, Sime, Nelson, Battany and Rust

• In research spanning more than three years, it was shown that liquid baits, when used in sufficient quantities, could effectively suppress ants and their Hemipteran honeydew sources, reducing damage to fruit and increasing crop yields.



"Improving Liquid Bait Programs for Argentine Ant Control: Bait Station Density" by Nelson and Daane

 This study helped define baiting strategies that could make baits viable alternatives to spraying.



"Liquid Borate Bait for Control of the Argentine Ant, Linepithema Humile, in Organic Citrus" by Greenberg, Klotz, and Rust

■ In this study, it was shown that 1% DOT bait could significantly reduce ant populations up to 76 meters from the treatment area. It was also demonstrated that this type of treatment uses less insecticide, is more target specific and reduces environmental contamination.



"Commercial Agrochemical Applications in Vineyards Do Not Influence Ant Communities" by Chee Seng Chong, Hoffman and Thomson

• In this study, it was shown that traditional spraying methods used in vineyards killed off the foragers, but left the rest of the colony intact in sheltered areas that did not receive treatment; therefore, the ant colonies remained viable and were able to recover.



"An Evaluation of Several Urban Pest Management Strategies to Control Argentine Ants" by Klotz, Rust, Greenberg, Field and Kupfer

- Bringing the research back to the urban setting, this study found the following:
  - a 73% reduction of ants with bait alone; and
  - an 83% reduction when the bait was used in combination with Termidor



# Research Summary:

- Liquid ant baits are preferred by tramp ants.
- Baiting closer to the colony (outdoors) enhances bait acceptance.
- Only Fipronil and Borates showed a 100% kill rate on the queen(s).
- Baits are effective for up to 76 meters away from where they are applied.
- Sprays don't get brought back to the colony, so if not directly treated, colonies remain viable and can reestablish infestations.
- Baiting can be cost effective and has added environmental benefits.

# Ant Control System

We need an ant control system:

- With a liquid bait that is attractive to many species of ants;
- That contains the right amount of Boron in a large-volume, spill-resistant container that helps to control evaporation;
- That is cost effective to use



#### Assess the Problem

Using the research noted above, we developed an Innovative approach to ant control, whereby the bait and bait delivery devices work together, and the treatment is sized to the problem.



# Gourmet Liquid Ant Bait [GLAB]

- Contains disodium octaborate tetrahydrate [DOT], a water soluble boron salt.
- DOT provides a delayed toxic effect, so the AI can work its way into the colony.
- There is no demonstrated resistance to DOT in either ants or roaches.
- GLAB is attractive to most sweetand protein-feeding ants; and
- It's safe to use around children and pets.





# Bait Delivery Systems:

Ant & RoachCafé Ready-to-UseBait Station

- ANTOPIA®
   Refillable
   Outdoor
   Bait Station
- Ant CaféRefillableBait Station





#### The ANTOPIA® Bait Station: Benefits

- Easy-to-use
- Tough blow-molded station
- Holds up to 14 ounces of bait
- Reduces spoilage
- Controls evaporation
- Keeps bait fresh and available for up to 6 months
- Has a built-in anchoring system
- Spill resistant
- Built for multi-season use
- Easily accessible fill port
- Available with solar and thermal insulation (ANTOPIA® R2D)



#### Ant Café Refillable Bait Station

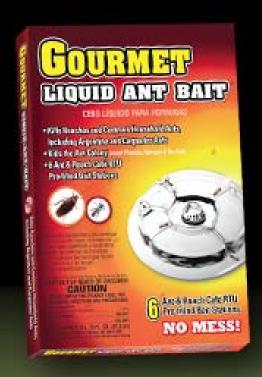
- Can be used indoors or outdoors
- Holds up to 1.5 ounces of liquid, gel or granular bait
- Keeps bait fresh by reducing exposure to air and contaminants
- Protects surfaces from contamination by the bait
- Inexpensive to use and reuse





## Ant & Roach Café Prefilled Ready-to-Use Bait Station

- Can be used indoors or outdoors
- Can be used to locate larger colonies or to be a complete treatment for smaller colonies
- Holds up to .75 ounces of liquid bait
- Keeps bait fresh by reducing exposure to air and contaminants
- Protects surfaces from contamination by the bait





# Ant & Roach Café Prefilled Ready-to-Use Bait Station

Double-click to play video



#### Tailor the Treatment to Fit the Problem

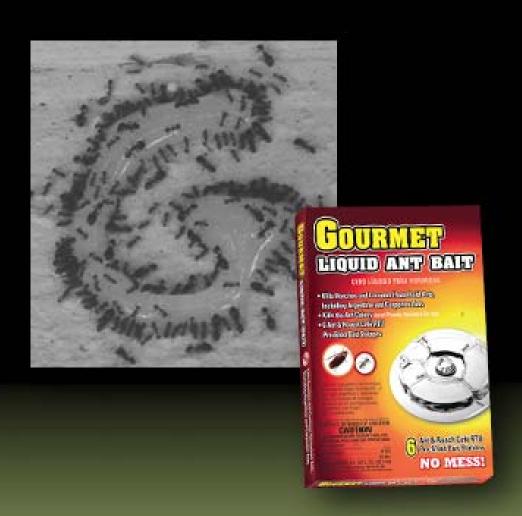
In an urban setting, we suggest classifying the infestations as:

- Small
- Mediumor
- Large



#### **Small Infestations**

- Only a few dozen foragers are seen
- Use Gourmet Ant Gel in our Ant Café Refillable Bait Stations
   or
- Gourmet Liquid Ant Bait in our pre-filled Ant & Roach Café RTU Bait Stations





#### **Small Infestations**

- Small infestations usually consist of ants like the Pharaoh Ant.
- The colony can have several dozen to several hundred workers.
- Colony can bud easily and form many satellite nests
- May nest exclusively indoors





#### Medium Infestations

- A few dozen to a few hundred foragers are seen
- Use several Gourmet Liquid Ant Bait pre-filled Ant & Roach Café RTU Bait Stations.
- Place in kitchens, bathrooms and near window sills (interior and exterior).





## Medium Infestations

- Medium infestations usually consist of ants like the Carpenter Ant or Pavement Ant.
- One queen in nest outside of structure
- Several satellite colonies connected to main colony





## Large Infestations

- Hundreds or thousands of foragers are seen
- Use ANTOPIA® Baiting System:
  - ANTOPIA® bait stations filled with Gourmet Liquid Ant Bait





## Large Infestations

- Large infestations usually consist of ants like the Argentine, Odorous House, Big Headed or Fire Ants.
- 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.





## The ANTOPIA® Baiting System

- Puts up to 14 ounces of our Gourmet Liquid Ant Bait in each station. The bait in each station can kill tens of thousands of ants.
- Research from Vega and Rust in 2001 established that the loss of 1 ml of bait represents 3,300 ant visits.
   Since there are 414 milliliters in a 14 ounce bait station, this would mean that each station holds enough bait for 1.3 million doses of ant bait!



## The ANTOPIA® Baiting System

 ANTOPIA<sup>®</sup> is inexpensive and can be filled at the office and securely capped for transport. It can be refilled and used for many years, so putting out enough stations to do the job is easy and cost effective.





## The ANTOPIA® Baiting System



Double-click to play video



#### Treating Urban Structures — Initial Placement

- Place stations near ant activity
- Place stations in shade
- Place near water
- Check stations weekly (at first)
- If stations are emptied, double the placement
- Replace bait as needed
- Use small stations inside the structure to give faster relief to the customer.





#### Treating Urban Structures — Initial Placement

- After initial control is achieved, revise the treatment plan.
  - Place stations away from structure and towards property perimeter.
  - Place stations between structure and likely ant reservoirs, such as wood lots or thick vegetation.





#### Placing ANTOPIA® Bait Stations, Method 1

- Loosen the soil to a depth of approx. 6".
- Remove the entryway cap.
- 'Screw' the bait station into soil until the entryway is level with the soil surface.



Double-click to play video



#### Placing ANTOPIA® Bait Stations, Method 2

- Remove the soil with hand spade or trowel to a depth of 6"
- Remove the entryway cap.
- Place the bait station into the hole until entryway is level with the soil surface
- Replace soil around bait station



Double-click to play video



## ANTOPIA®

- Ants will enter the station, feed and return to their nest with the bait.
- Studies show that up to 50% of consumed bait will be transferred to other colony members.





## **ANTOPIA®**

As the ant population at the site is reduced, the number of stations can be reduced and the amount of bait in each station can be reduced.





## How Much Bait — Rural and Ag?

- In rural or agricultural settings:
  - 1 gallon/acre (full strength or 1:1 ratio) for light populations
  - 2 gallons/acre (full strength or 1:1 ratio) for medium populations; and
  - 3-4 gallons/acre (full strength or 1:1 ratio) for heavy populations





### How Much Bait — Urban Settings?

- For initial placement:
  - Place one bait station every fifty feet around the structure to be treated.
  - If any of the bait stations are emptied in less than a week, double the initial placement.
  - Replace baits as needed until feeding activity ceases.





## Reusing ANTOPIA® Bait Stations

- If less than six months from first use, remove cap on top and add bait of the same type being used.
- If spill resistance is desired, fill station to approximately 8 fluid ounces.
- If spill resistance is not critical, fill bait station to top of internal spiral, approximately 14 fluid ounces of bait.



## Reusing ANTOPIA® Bait Stations

- If more than 6 months since first use or last cleaning, empty bait station completely.
- Dispose of uneaten bait in accordance with label directions.
- Fill bait station with mild bleach solution (1% chlorine) and allow to sit at least 1 hour.
- Empty bait station and dispose of rinsate properly.
- Rinse bait stations several times with water or mild soap and water solution; empty station.
- Allow station to dry.





## Reusing ANTOPIA® Bait Stations

- Replace lower seal if station is to be transported filled.
- Add bait through top fill port to either 7 or 14 fluid ounce level.
- Replace fill port cap.





#### Supplementing ANTOPIA® Bait Stations

- In severe cases, the ANTOPIA® Baiting System can be used in conjunction with non-repellent residual chemicals, such as Termidor®.
- Treat the station exterior or under side of optional bait station cover, to supplement the bait's effectiveness.



#### The Benefits of ANTOPIA® Baiting System

- Eliminates the ant colony
- Uses ants' normal feeding behaviors to introduce a toxicant into the colony that kills the queen(s).
- Kills the colony up to 300 ft. away from the treatment site, which, in an urban environment, might not be on the customer's property.



#### The Benefits of ANTOPIA® Baiting System

- Provides 24 hour per day, 7 day per week treatment of the property.
- Minimizes the exposure of people and pets to toxic chemicals.
- Prevents the destruction of non-target pests and preserves the beneficial insects, which can be important in preventing damage from aphids and scales.



#### The Benefits of ANTOPIA® Baiting System

- Insecticides are protected from degradation from the sun and rain.
- Insecticides are kept out of the ground water.
- Reduced service frequency after initial control has been achieved.



## Availability:

 Professional pest control suppliers in the U.S., Canada and Australia



#### For Additional Information, Contact:

Alan Bernard, COO 877-483-4997 or alan@antcafe.com

#### **Innovative Pest Control Products**

Because You Care
About the Planet We Share

Visit us online at <u>www.antcafe.com</u>

