



# Fire Ant Management

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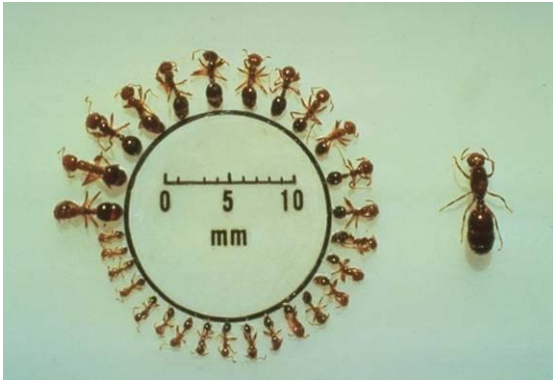
# Fire Ant Identification



- Two nodes
  - sting present
- Eyes large
- Base of antennae covered
- Gaster not hung below post petiole
- 10 segmented antennae
  - 2 segmented club at end

All photos courtesy of <http://fireant.tamu.edu> unless otherwise noted

# Fire Ant Identification



- Polymorphic workers
- Aggressive
- At least 3 mm long
- Rapidly run up objects placed in the mound
- Bite and sting object

# Fire Ant Stings

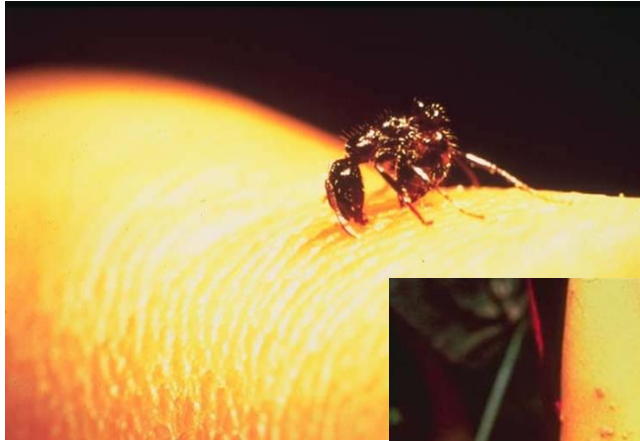


Photo by Murray Blum

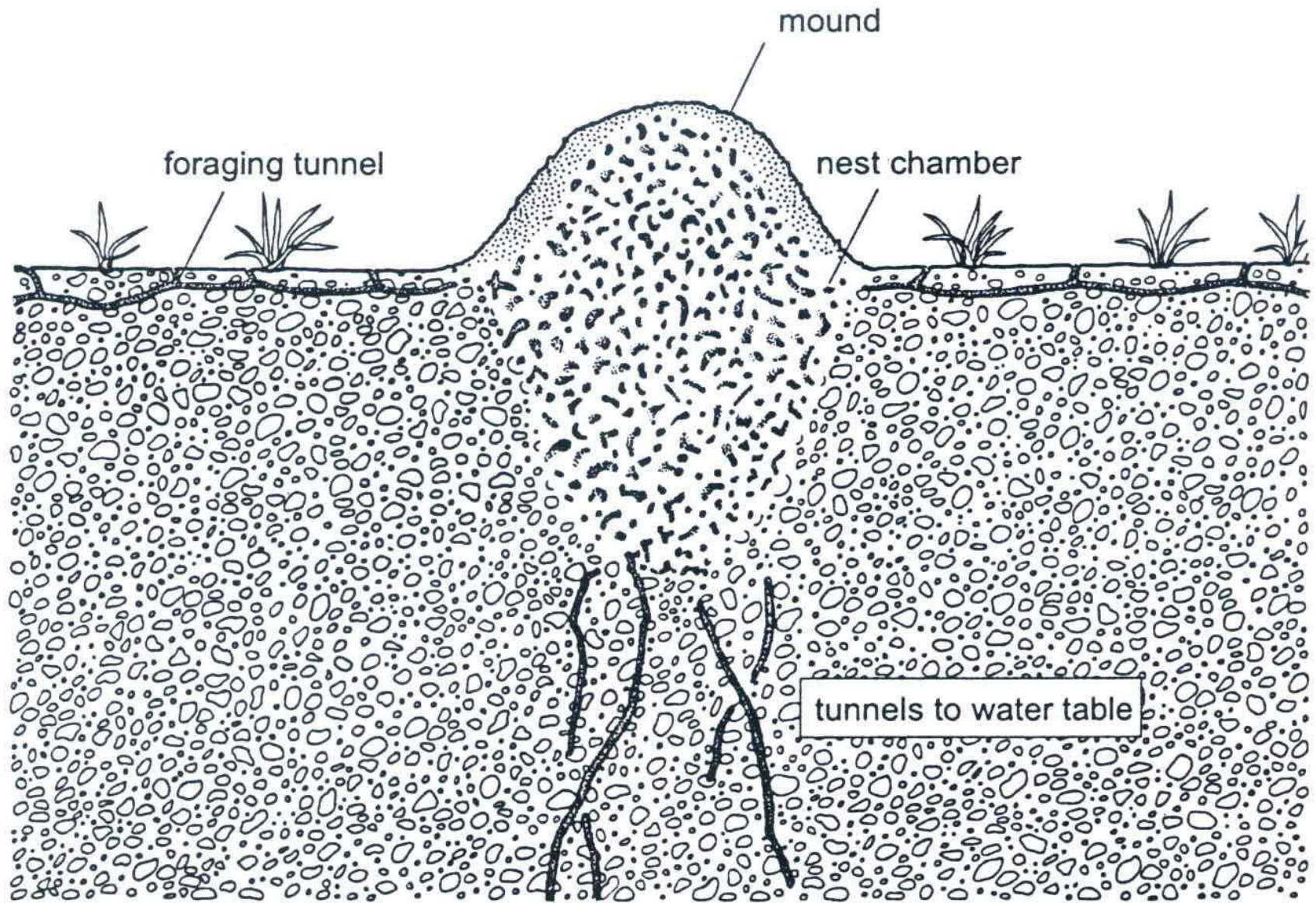
- Bites and Stings
  - causes burning & itching sensation
- Sting multiple times
- Remove ants by rubbing them off
- Reaction to stings
  - varies from no reaction to one sting causing death

# Mound Characteristics



- Builds in almost any type of soil
- Build in open or against things (buildings, trees, electrical boxes)
- Can reach 18 inches in height
- NO central opening
- Can occur in or under buildings





**Simplified cross section diagram of a red imported fire ant mound**



# Survey-Based Management

- Broadcast bait only in areas with more than 15-20 mounds per acre
  - approximately 5 mounds per  $\frac{1}{4}$  acre lawn
  - mark off area and count the number of mounds
- Surveying ant foraging
  - make bait station
  - map area
  - identify and count ants
- Helps to target management measures

# Non-chemical Management



- Arthropod Predators and Parasites
  - competing native ant species
  - phorid fly species (Diptera)

Photo by L.E. Gilbert



# Home remedies & Organics



motherearthnews



Health.com

- Mound drench with 2-3 gallons boiling water
  - 60% control
- Home remedies
  - 2013 webinar
- Organics
  - D-limonene, spinosad



Fertilome.com

# Insecticide formulations- contacts



USDA-ARS



Citybugs.tamu.edu

- Work on nervous system
- Vary on how long takes to kill & how long it lasts in environment
- Ants must contact product

# Insecticide formulations- baits



NCSU



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- Contain active ingredient (what kills ant) in something to eat or drink
- May work on nervous system or interfere with reproduction or growth

# Tips for using baits



NCSU

- Must be fresh
- Apply when ants are foraging
- Do NOT get bait wet



Extension.org

# Outdoor Management



- Two-Step Method
- Broadcast bait treatment
  - poses minimal environmental and health risks
  - more time to achieve control (about 2 to 10 weeks)
  - provide better results
- Individual mound treatment
  - best for quick control of problem mounds,
    - near sidewalks or playgrounds
  - expensive
  - time consuming
- Broadcast granular treatment

# Management- Broadcast Baits



- Use fresh bait
- Do not disturb mounds before baiting
- Apply when ants are foraging
  - When soil temperature is between 70-90°F
- In summer, may be necessary to apply in the evening
- Can give 0 days to 8-12 months of control



# Management- Drenches



- Chemical mixed with water and poured over mound
- Must be apply enough to penetrate entire mound (1-2 gallons)
- Usually eliminates mound in a few hours
- Do not disturb mound

# Management- Dusts



- Ants walking through treated soil get dust on their body and take it back into the mound
- Kills colony within a few days
- Distribute labeled amount of dust over mound
- Do not inhale dust or get it on your skin



# Management- Granules

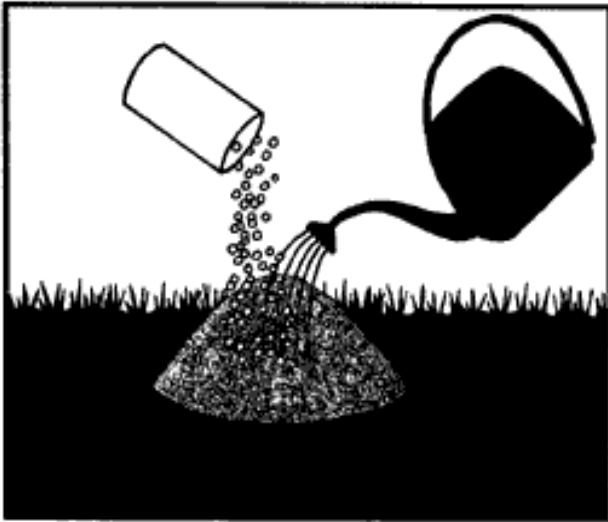


Photo from University of Arkansas Cooperative Extension

- Al is released when water is poured over the granules
- Measure proper amount of granules and sprinkle over and around the mound
- Do not disturb mound
- If label says to water in, pour 1-2 gallons of water over granules in droplet form

# Management- Baits

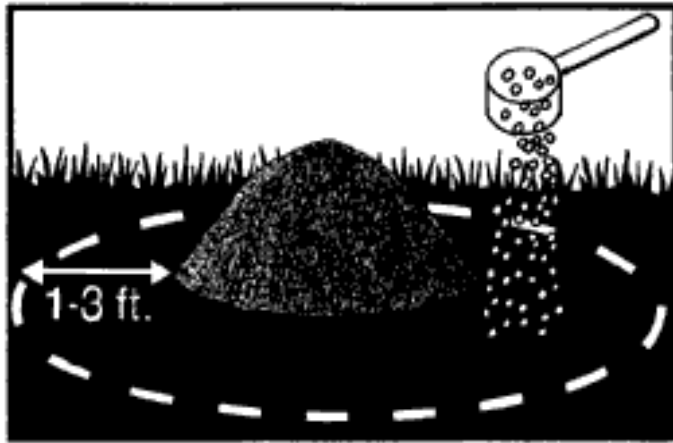


Photo from University of Arkansas Cooperative Extension

- Use fresh bait
- Do not disturb mounds before baiting
- Apply when ants are foraging
- Do not apply to the mound-apply AROUND the mound
- Do NOT get bait wet

# Management- Broadcast Granulars



- Use drop spreader
- Best applied in spring
- Water in after application
- Can give 12-18 months of control

# Treatment Adjacent to Concrete



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LSU Ag Center

- Mounds next to sidewalks and roadside curbs, foundations of structures
  - Use bait

# Indoor Management



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- Result of mounds located next to the infested building
  - Vacuum ants on inside
  - Bait for ants outside

# Community-Wide Management

- When individuals bait, reinfestation is common
- Coordinate the battle
  - give instructions
    - what bait to purchase
    - how to apply bait
    - treatment date (also give rainout day)
- Planning
  - determine area to be treated
  - respect differences
  - recognize limitations
  - follow pesticide regulations

