

Registration form

Ant Control CEU Training Course \$100.00
48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$50.00
Rush service does not include overnight delivery or Fedex fees.

Start and finish dates: _____

You will have 90 days from this date in order to complete this course

Name _____ **Signature** _____

(This will appear on your certificate as above)

Address: _____

City _____ **State** _____ **Zip** _____ **Email** _____

Phone:
Home () _____ **Work** () _____ **Fax** () _____

License or Operator ID # _____ **Exp Date** _____

Class/Grade _____

Please circle which certification you are applying the course CEU's.

Commercial Applicator Residential Applicator Industrial Applicator

Pesticide Handler Agricultural Applicator Advisor Aerial Applicator

Other _____

Your certificate will be mailed to you in about two weeks.

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Ant Control Answer Key

Name

Phone Number

Address

Please circle the best answer

- | | | | |
|---------|----------|----------|----------|
| 1. A B | 52. A B | 103. A B | 154. A B |
| 2. A B | 53. A B | 104. A B | 155. A B |
| 3. A B | 54. A B | 105. A B | 156. A B |
| 4. A B | 55. A B | 106. A B | 157. A B |
| 5. A B | 56. A B | 107. A B | 158. A B |
| 6. A B | 57. A B | 108. A B | 159. A B |
| 7. A B | 58. A B | 109. A B | 160. A B |
| 8. A B | 59. A B | 110. A B | 161. A B |
| 9. A B | 60. A B | 111. A B | 162. A B |
| 10. A B | 61. A B | 112. A B | 163. A B |
| 11. A B | 62. A B | 113. A B | 164. A B |
| 12. A B | 63. A B | 114. A B | 165. A B |
| 13. A B | 64. A B | 115. A B | 166. A B |
| 14. A B | 65. A B | 116. A B | 167. A B |
| 15. A B | 66. A B | 117. A B | 168. A B |
| 16. A B | 67. A B | 118. A B | 169. A B |
| 17. A B | 68. A B | 119. A B | 170. A B |
| 18. A B | 69. A B | 120. A B | 171. A B |
| 19. A B | 70. A B | 121. A B | 172. A B |
| 20. A B | 71. A B | 122. A B | 173. A B |
| 21. A B | 72. A B | 123. A B | 174. A B |
| 22. A B | 73. A B | 124. A B | 175. A B |
| 23. A B | 74. A B | 125. A B | 176. A B |
| 24. A B | 75. A B | 126. A B | 177. A B |
| 25. A B | 76. A B | 127. A B | 178. A B |
| 26. A B | 77. A B | 128. A B | 179. A B |
| 27. A B | 78. A B | 129. A B | 180. A B |
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| 29. A B | 80. A B | 131. A B | 182. A B |
| 30. A B | 81. A B | 132. A B | 183. A B |
| 31. A B | 82. A B | 133. A B | 184. A B |
| 32. A B | 83. A B | 134. A B | 185. A B |
| 33. A B | 84. A B | 135. A B | 186. A B |
| 34. A B | 85. A B | 136. A B | 187. A B |
| 35. A B | 86. A B | 137. A B | 188. A B |
| 36. A B | 87. A B | 138. A B | 189. A B |
| 37. A B | 88. A B | 139. A B | 190. A B |
| 38. A B | 89. A B | 140. A B | 191. A B |
| 39. A B | 90. A B | 141. A B | 192. A B |
| 40. A B | 91. A B | 142. A B | 193. A B |
| 41. A B | 92. A B | 143. A B | 194. A B |
| 42. A B | 93. A B | 144. A B | 195. A B |
| 43. A B | 94. A B | 145. A B | 196. A B |
| 44. A B | 95. A B | 146. A B | 197. A B |
| 45. A B | 96. A B | 147. A B | 198. A B |
| 46. A B | 97. A B | 148. A B | 199. A B |
| 47. A B | 98. A B | 149. A B | 200. A B |
| 48. A B | 99. A B | 150. A B | |
| 49. A B | 100. A B | 151. A B | |
| 50. A B | 101. A B | 152. A B | |
| 51. A B | 102. A B | 153. A B | |

Please mail or fax this with your final exam

ANT CONTROL CEU COURSE PROFESSIONAL DEVELOPMENT COURSE

CUSTOMER SERVICE RESPONSE CARD

DATE: _____

NAME: _____

ADDRESS: _____

E-MAIL _____ PHONE _____

PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.

1. Please rate the difficulty of your course.

Very Easy 0 1 2 3 4 5 Very Difficult

2. Please rate the difficulty of the testing process.

Very Easy 0 1 2 3 4 5 Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.

Very Similar 0 1 2 3 4 5 Very Different

4. How did you hear about this Course? _____

5. What would you do to improve the Course?

Any other concerns or comments.

Ant Control CEU Training Course Assignment

You will have 90 days from the start of this course to have successfully completed this assignment with a score of 70%. You may e-mail the answers to TLC, info@tlch2o.com or fax the answers to TLC (928) 272-0747. You can find online assistance for this course on the in the Search function on Adobe Acrobat PDF to help find the answers

1. All ants live in colonies, consisting of an egg-laying female (queen), long-lived males, and soldiers (sterile females). The ants you see foraging in your garden or kitchen are workers. Workers that find food communicate with other workers by depositing a chemical message on the substrate as they crawl back to the nest.
A. True
B. False
2. Often we can smell it, this "**trail pheromone**" sticks to the substrate for short periods of time and helps other ants find the food at the end of the trail.
A. True
B. False
3. In late summer, ants develop wings and fly to new locations and invade homes to forage for food or to establish a new nest.
A. True
B. False
4. Termites do not develop wings but swarm during the spring and look similar to flying ants.
A. True
B. False
5. Ants are thick-waisted and have elbowed antennae. Termites do not have antennae.
A. True
B. False
6. Termites have thinner waists and do not have antennae; ants antennae resemble strings of tiny beads. You may need a magnifying glass to examine antennal features.
A. True
B. False
7. As a group, ants have a wide food range, feeding on sweet foods, greasy materials, starchy substances, wood, and all kinds of plant and animal materials. Part of the reason that ants become a nuisance in our homes is that they often like the same kinds of food that we do.
A. True
B. False
8. Ants that live outside will travel inside the home to search for food. Some species may ultimately reside in houses.
A. True
B. False

9. Bait treatments and insecticides can be used to control ants in the outside nest. To be effective, baits must be placed in areas where ants frequent, eaten and be taken back to the nest. There are several different kinds of baits available, and you may have to do a little trial-and-error to find the proper bait.

- A. True
- B. False

10. Because the ants must get back to the nest for satisfactory control this strategy may be incompatible with insecticide sprays which may kill worker ants before they can get back to the nest with the bait. The successful use of bait may take several weeks or more. Insecticide dilutions can be used outside to successfully drench ant nests. Be sure to follow label recommendations for correct procedures when applying the insecticide.

- A. True
- B. False

11. There are some types of ants that actually establish a nest inside your home instead of merely entering to forage for food and returning outdoors. Ants in this category may be present year round, although they will be less active in the warmer months.

- A. True
- B. False

12. Ant baits can again be a useful tool in eradicating inside-the-home ant nests, although baits may not work as well with Black ants as the other species mentioned.

- A. True
- B. False

13. Workers must eat the bait, take it back to the nest, and feed to the king and pupal ants. This type of control is incompatible with treatments that prevent workers from returning to the nest with the bait.

- A. True
- B. False

14. Unlike other home-inhabiting ants, Ghost ants cause structural damage to wood by tunneling and nesting inside wood structures. However, they rarely nest in sound wood, but consistently invade wood that has become wet and started to decay.

- A. True
- B. False

15. Ghost ants are large (about 3/8 to 1/2" long) and black or red.

- A. True
- B. False

16. The best way to control carpenter ants that inhabit a dwelling is to find the nest and destroy it. Insecticide sprays inside the home will kill some of the worker ants, but unless the entire nest is treated, the queen will continue to produce additional members of the colony.

- A. True
- B. False

17. Locating a nest can be difficult because nests may be in locations within the walls or roof rafters.
A. True
B. False
18. The most likely places to find Acrobat ant nests are where wood has been wet and weathered, such as rotting timbers about the foundation, window sills, porches, around leaky plumbing, and in rafters under a leaky roof.
A. True
B. False
19. The Crazy ant, *Crematogaster* sp., nests under stones, in stumps or dead wood and occasionally invades the home.
A. True
B. False
20. The Crazy ant will have a heart-shaped abdomen that is often held up over their bodies. They feed primarily on honeydew produced by aphids.
A. True
B. False
21. Crazy ants get their name from their unique habit of sometimes running while holding their abdomen above their thorax when disturbed. This gives them the appearance of an acrobat who walks on his or her hands.
A. True
B. False
22. Acrobat ants will build large, above ground mounds.
A. True
B. False
23. You are more likely to find Acrobat ants nesting in dead tree limbs, hollow logs, fallen trees, old tree stumps or even the hollow cavity of a tree.
A. True
B. False
24. Around a home or business, acrobat ant colonies can be found in any organic litter or mulch and beneath stacks of firewood, under stepping stones, landscape timbers, bird baths, etc.
A. True
B. False
25. Acrobat ants are often found in shrubs or ornamentals, feeding on insects and the honeydew produced by aphids.
A. True
B. False

26. Acrobat Worker ants will enter a home or other structure by crawling along electrical and phone lines. They also access homes from shrubs or trees which are too close or touching the building or by simply crawling up the outside walls to enter around windows, doors, cracks, crevices or through vents. It would be very difficult (if not impossible) to eliminate all access points.

- A. True
- B. False

27. The Argentine ant, *Iridomyrmex humilus* (Mayr), workers are dark yellow in color to dark red and generally nest outdoors. It is not common in areas infested by the red imported fire ant.

- A. True
- B. False

28. The Bigheaded ant, *Pheidole megacephala* (Fabricius). Worker ants have relatively large heads compared to their bodies. They have a 7 segmented antenna and three-segmented clubs.

- A. True
- B. False

29. Bigheaded ant habits are similar to red imported fire ants, feeding on live and dead insects, seeds and honeydew outdoors and greasy food sources and sweets indoors.

- A. True
- B. False

30. Workers of the Crazy ant, *Paratrechina longicornis* (Latreille), are slow moving grayish brown ants with long legs and antennae.

- A. True
- B. False

31. Crazy ant will nest primarily indoors, they will forage in homes. Although they are omnivorous, they are difficult to attract to ant baits.

- A. True
- B. False

32. The little Black ant, *Monomorium minimum* (Buckley), is a fast-moving small and black ant that is generally a pest indoors.

- A. True
- B. False

33. Black ant Workers prey on insects and feed on honeydew produced by sucking types of insects such as aphids.

- A. True
- B. False

34. The Little Black ant is versatile, nesting both indoors and outdoors. The ants prefer decayed woods but will build nests in any woodwork voids or cracks in cement. Outdoor colonies are found under stones/rocks, in rotting logs, in lawns, or in open areas.

- A. True
- B. False

35. Black ant nests can be located by the small craters of fine soil which are deposited at their entrances.
A. True
B. False
36. Black ant workers forage in scent marked trails along the edges of structures such as foundation walls and along sidewalks outside. They feed on aphids as a source of honeydew, plant secretions and are predaceous on other insects.
A. True
B. False
37. In the home the little black ant will feed on almost any food items it can find, such as grease, oil, meats, sweets, fruits and vegetable materials such as corn meal. The little black ant is not native to the United States and can be found only in the southwest parts of the country.
A. True
B. False
38. Black ants are most populous in the eastern half of the U.S., in southern California, and in the bay area of San Francisco.
A. True
B. False
39. Workers of the Pavement ant, *Tetramorium caespitum* (Linnaeus), also resemble the Ghost ant, but on close examination the head and thorax are smooth with parallel grooves rather than being roughened.
A. True
B. False
40. To avoid further infestations indoors, all cracks and gaps in exterior walls may be sealed. To limit the nesting of ants surrounding the dwelling, all debris should be removed and firewood stored off the ground.
A. True
B. False
41. Ant foraging trails can be followed back from the food source to the nest. Infested interior walls and voids in the outside ground-floor walls may be treated by aerosol injection of a suitable insecticide (CB-80, CB-Invader, CB-Strikeforce) or by an application of a dust formulation (Delta Dust).
A. True
B. False
42. Baits should be positioned where ant trails have not been established.
A. True
B. False
43. Sweet baits are generally the most effective; however, if acceptance is low, a carbohydrate based bait may be considered.
A. True
B. False

44. Argentine ants are most active in the evening hours, foraging for all kinds of food, both inside the house and outside.
A. True
B. False
45. Argentine ants keep the tunneled galleries very clean and push the sawdust and dead insect parts out small holes in the wood; a small, fresh pile of sawdust under the nest timber is the usual sign of an active carpenter ant nest.
A. True
B. False
46. Once a Carpenter ant nest is found, treatment is usually easy with either an insecticide dust or spray. Injection of insecticide into wall voids or the nest itself may be necessary to insure complete control.
A. True
B. False
47. To prevent further carpenter ant infestations, trim all trees and bushes so branches do not touch the house and correct moisture problems such as leaky roofs and plumbing.
A. True
B. False
48. Paint and/or seal exposed wood construction before it becomes wet. Replace previously ant-infested wood, rotted or water-damaged wooden parts of the structure and eliminate wood/soil contacts.
A. True
B. False
49. Ants are a major annoyance to homeowners and are difficult to control. You should not underestimate the importance of good sanitation to eliminate food sources, although good sanitation may not control an ant infestation by itself.
A. True
B. False
50. Although we do not like sharing our homes with ants, they are beneficial organisms in the balance of nature. In nature, ants greatly reduce the amount of dead and decaying plant and animal organic matter.
A. True
B. False
51. Ants also aerate the soil with their nests. Many ant species have a fondness for honeydew that aphids produce from feeding on plants.
A. True
B. False
52. Large numbers of ants crawling on a plant may be a sign of serious aphid infestation.
A. True
B. False

53. Ant infestations are not easy to control and different strategies should be used depending on nest location and food preferences of the ants.
A. True
B. False
54. Carpenter ants are usually smaller than most other house infesting ants.
A. True
B. False
55. Carpenter ants vary in color from a bright purple or orange color to a combination of black and dull red or reddish-orange.
A. True
B. False
56. Carpenter Worker ants range in size from 7/16 to 13/16 inches long.
A. True
B. False
57. Once the carpenter ant nest has been located, control is relatively easy. Treatment options include use of a bait or residual contact insecticide applied as a dust or spray to the nest.
A. True
B. False
58. Pharaoh ant workers are very large (about 7/16-inch long) light yellow to reddish brown in color with the abdomen (hind portion of body) somewhat lighter.
A. True
B. False
59. The Pharaoh ant workers have a stinger.
A. True
B. False
60. Pharaoh ants' petiole (narrow waist between the thorax and abdomen) has two nodes and the thorax has no spines.
A. True
B. False
61. Pharaoh ants' eyes are poorly-developed.
A. True
B. False
62. Pharaoh ants' antennal segments end in a distinct club with three progressively longer segments. This is in contrast to the thief ant's two-segmented club.
A. True
B. False
63. Odorous ants so called the sugar ant or piss ant, these are some of the smallest ants, about 1/12-16 inch long, with a light tan to reddish body.
A. True
B. False

64. Pharaoh ant colonies consist of one to several hundred queen ants, sterile female worker ants, periodically produced winged male and female reproductive ants (sexuals) and brood (developmental stages).
A. True
B. False
65. Pharaoh ants will swarm.
A. True
B. False
66. Pharaoh ant colonies multiply by "**budding**", whereby a large part of an existing colony migrates carrying brood to a new nesting site.
A. True
B. False
67. Female Pharaoh ants can lay 4000 or more eggs in her lifetime. Most lay 100 to 120 eggs per batch in the early days of egg production and only four to seven eggs per batch later.
A. True
B. False
68. At 80°F and 80 percent relative humidity, eggs hatch in five to seven days.
A. True
B. False
69. The ant larval period is 18 to 19 days, prepupal period three days and pupal period nine days.
A. True
B. False
70. About four more weeks are required to produce sexual female and male forms.
A. True
B. False
71. The entire life cycle takes about 38 to 45 days depending on temperature and relative humidity. Unlike most ants, they breed continuously throughout the year in heated buildings and mating occurs in the nest.
A. True
B. False
72. A single queen can produce many hundreds of workers in a few days.
A. True
B. False
73. Mature colonies contain several queens, winged males, sterile females or workers, eggs, larvae, prepupae and pupae growing to as large as 300,000 or more members.
A. True
B. False

74. Periodically a queen, together with a few workers carrying immatures (eggs, larvae and pupae), leaves the nest and sets up a new colony elsewhere, quickly spreading an infestation.

- A. True
- B. False

75. The above behavior pattern is known as "**satelliting**," "**fractionating**" or "**budding**" where part of the colony migrates to a new location rather than by single females dispersing after a reproductive swarm.

- A. True
- B. False

76. Budding may occur due to overcrowding, seasonal changes in the building's central heating and cooling system or application of a repellent pesticide.

- A. True
- B. False

77. Nests are often so small they can be contained in a thimble, located between sheets of paper, in clothing or laundry, furniture, foods, etc.

- A. True
- B. False

78. Nests usually occur in wall voids, under floors, behind baseboards, in trash containers, under stones, in cement or stone wall voids, in linens, light fixtures, etc.

- A. True
- B. False

79. They prefer light, wet areas near hot water pipes and heating tapes, in bathrooms, kitchens, intensive care units, operating rooms, etc.

- A. True
- B. False

80. Carpenter ants are "**trail-making**" ants and often are found foraging in drains, toilets, washbasins, bedpans and other unsanitary sites as well as in sealed packs of sterile dressing, intravenous drip systems, on surgical wounds, food and medical equipment.

- A. True
- B. False

81. Pharaoh ant mouthparts are for chewing.

- A. True
- B. False

82. Pharaoh ants are omnivorous, feeding on sweets (jelly, particularly mint apple jelly, sugar, honey, etc.), cakes and breads, and greasy or fatty foods (pies, butter, liver and bacon).

- A. True
- B. False

83. Nests can be found outdoors and almost anywhere indoors (light sockets, potted plants, wall voids, attics, in any cracks and crevices) particularly close to sources of warmth and water.
A. True
B. False
84. Pharaoh ants are usually much easier to control than other ants because of their ability to disperse.
A. True
B. False
85. There may be dozens or hundreds of Pharaoh ant colonies in a single building and when a few colonies are missed during control, populations will quickly rebound. About 90 percent of the colony remains hidden in the nest so even if 10 percent of the colony is killed by a residual pesticide, the remaining reservoir of ants is enormous.
A. True
B. False
86. Conventional contact pesticide applications especially repellent products such as pyrethrins will not spread infestations to new areas with multiple colonies blossoming within the structure.
A. True
B. False
87. Pharaoh ants are not able to avoid certain pesticides.
A. True
B. False
88. Pharaoh ants control is difficult and often short term (weeks to months), depending on the building size, wall voids, etc., especially in hospitals and food plants.
A. True
B. False
89. Carefully examine the building inside and outside from the roof to the basement, finding the ant distribution, population size and food sources.
A. True
B. False
90. Locate ant trails, following them to where feeding occurs. A single stream of ants moving in one direction may indicate colony movement, not foraging. Mark the established feeding trail with a sticker and date.
A. True
B. False
91. Trails with many ants coming and going indicate a very small colony.
A. True
B. False

92. Pre-baiting (dilute honey or peanut butter on three-by-five cards) helps to identify "**hot spots**," but with experience one will already know where such places are located. In the winter, ants tend to concentrate near and around heat, whereas in the spring and summer they move to the outside walls and distribute themselves throughout the building.
- A. True
B. False
93. Carefully check areas with moisture such as pipes, faucets, air conditioners, refrigerators, drains, leaking roofs, etc.
- A. True
B. False
94. When insecticides are prohibited around high-tech equipment and in health areas, use sticky tapes, double-faced adhesive tapes and masking tape (glue side out) wrapped around objects as barriers.
- A. True
B. False
95. Use a ring of petroleum jelly, non-hardening glues, sticky dust mats or glue boards under equipment legs.
- A. True
B. False
96. Seal cracks and voids with caulking compound after applying low residual repellent insecticides such as chlorpyrifos (Dursban) or Diazinon.
- A. True
B. False
97. In areas of active Pharaoh ant colonies, treat walls and ceiling voids through cracks and crevices with non-repellent boric acid dust and make bait placements.
- A. True
B. False
98. Keep the ants in the area long enough to get the slow-acting toxicants to the main colony where the workers, larvae and queens are poisoned. (A delayed action stomach poison is recommended.)
- A. True
B. False
99. Repellent insecticides, such as pyrethrins, will move the colonies, spreading them further throughout the building.
- A. True
B. False
100. Research has shown that it is best to use bait placement only where active ant trails are found. This assures feeding since some ants have not been able to find the bait when only one inch away from the bait stations.
- A. True
B. False

101. Intersect the ant trail with bait on a cotton swab taken from the station to ensure instant feeding.

- A. True
- B. False

102. Bait preferences do not change during the season due to changing needs of the developing colonies.

- A. True
- B. False

103. An effective bait is a 5 percent boric acid formulation mixed at a 99 percent concentration by weight in mint apple jelly (about two level tablespoons of powdered boric acid per 10 ounces of mint apple jelly). Another bait is 98 percent boric acid and 1 percent light corn syrup.

- A. True
- B. False

104. A commercial bait called methoprene (Pharorid) is marketed for use by pest control operators in a bait that consists of liver, honey and sponge cake. It is often difficult to use the bait ants prefer; as ants feed on one compound, another compound placed less than 1/4-inch away will be ignored until the ants spill over into the second bait.

- A. True
- B. False

105. Boric acid and methoprene baits work fast, sometimes taking 15 to 40 hours or less before ant eradication.

- A. True
- B. False

106. A bait, containing hydramethylon (same as in Maxforce roach bait stations) gives quicker results, 2 to 35 days, according to certain pest control operators.

- A. True
- B. False

107. Bait stations may include jumbo size plastic drinking straw sections, medicine (pill) dispensing cups, plastic vial caps and/or drafting (masking) tape. Placement can be made on the rear lip of kitchen counters, at plumbing pipe-wall junctions, on window sills, behind wall electrical outlets, above door frames, etc., in less accessible areas of pets or young children.

- A. True
- B. False

108. There may be increased or new ant feeding activity during the early part of the baiting program. Other pesticides, heavy-duty cleaners, or paints can be used during the baiting periods to encourage ant feeding.

- A. True
- B. False

109. Applications of bendiocarb (Ficam), which is odorless, can give slow eradication of Pharaoh ants if treatments are thorough. Ficam 76 percent WP and 91 percent dust are labeled for the public's use.

- A. True
- B. False

110. The bait products most recommended for Pharaoh ant control include: boric acid plus mint apple jelly (Drax), hydramethylnon (Maxforce), methoprene (Pharorid), bendiocarb (Ficam), propoxur (Baygon) and sulfluramid (Pro-Control).

- A. True
- B. False

111. After bait stations are placed, one will see ants trailing to and from these bait stations. Do not spray or disturb the ants or bait stations. Ants must be allowed to carry the bait back into their nest where the active ingredient in the bait will eliminate the colony.

- A. True
- B. False

112. Pharaoh ants are very rare throughout the U.S. and the least occurring indoor ant; in hospitals, it can be a carrier of more than a dozen pathogenic bacteria including Staphylococcus, Salmonella, Pseudomonas and Clostridium; these ants do sting and usually do bite.

- A. True
- B. False

113. Red imported fire ants (**RIFA**) are small sized ants that build mounds of soft soil rarely larger than 60" in diameter.

- A. True
- B. False

114. **RIFA** emerge out aggressively when they are disturbed and sting.

- A. True
- B. False

115. **RIFA** sting usually leaves a white pustule the next day.

- A. True
- B. False

116. Harvester ants are much larger and make large bare areas with a single entrance hole to the colony.

- A. True
- B. False

117. Leaf cutter ants are also much larger and do not have a distinctive built-up mound, but do have many entrance holes over a very large area.

- A. True
- B. False

118. Other small to medium-sized ants that build small mounds will actually run away from disturbances and aren't **RIFA**.

- A. True
- B. False

119. Some confusion comes from the fact that red imported fire ants come in a variety of sizes (1/16 to almost 1/4 inch long) with the largest workers 2 or 3 times larger than the smallest.

- A. True
- B. False

120. Native fire ants are more common in imported fire ant infested areas.

- A. True
- B. False

121. *Solenopsis geminata* is the most common native fire ant species encountered. To the unaided eye, they are easy to determine when compared to red imported fire ants.

- A. True
- B. False

122. *Solenopsis geminata* will have a few larger workers with large, square-shaped heads. These ants specialize in collecting and milling seeds.

- A. True
- B. False

123. **Single queen** (monogyne form): only one queen per colony or mound; slightly larger workers; members of colonies are territorial; mound densities usually 2080 mounds per acre; fewer ants per acre.

- A. True
- B. False

124. **Multiple queen** (polygyne form): dozens of queens per colony; smaller average worker ants; colonies are interconnected; mound densities 100 to 1,000+ per acre; more ants per acre.

- A. True
- B. False

125. Although most ants are recognizable, some forms of winged ants are often confused with termites, especially during the termite swarming season. The front pair of wings on ants is larger than the hind pair, while the four wings of termites are approximately the same size.

- A. True
- B. False

126. Ants have "**elbowed**" antennae and a "**thin waist**," being narrow between the thorax and hind abdominal segments.

- A. True
- B. False

127. Termites have the thorax and abdomen broadly connected and their antennae are straight and hair-like.
A. True
B. False
128. Fire ants are from Africa. They entered the U.S. through Mobile, Alabama, probably in soil used for ships' ballast. They were accidentally introduced around the 1980s and have been spreading ever since.
A. True
B. False
129. Red imported fire ants are very aggressive, efficient competitors. Since the 1950s, the ant has been spreading northward, westward, and southward from Texas.
A. True
B. False
130. Warm winters tend to push them back. Western spread is not largely dependent on water. They will mostly be found in urban areas, creek bottoms, irrigated land, etc.
A. True
B. False
131. The entire Pacific Coast is fertile ground for Fire ant infestation. The bad news is that they are probably here to stay. The good news is that with relatively little cost and effort, you can prevent most of the problems they cause using currently available methods.
A. True
B. False
132. Fire ants are not very sensitive to vibration or movement and tend to sting when the object they are on moves. The ants swarm up a person's leg and when one ant stings that person jerks or moves. This movement will not trigger many of the other ants to sting in response. Thus, it appears they all sting at the same time, and most do not.
A. True
B. False
133. Fire ants inflict a fiery sting, which causes a small blister or pustule to form at the site of each sting after several hours. The blisters become itchy while healing and are prone to infection if broken.
A. True
B. False
134. Fire ants can overwhelm and kill even healthy, non-allergic people, but encounters are rather rare. Africanized Bees can't overwhelm a healthy, mobile person and even hundreds of stings are rarely fatal.
A. True
B. False

135. Fire ant mounds are extremely common. So the chance of being killed by bees is higher if you come across them, but the chance of being killed by fire ants is higher only if you are highly allergic or cannot quickly get away from them. The chances of either are very small.

- A. True
- B. False

136. Red imported fire ants can be easily eradicated completely with methods available today. They can also be eliminated temporarily from small areas, with proper control methods.

- A. True
- B. False

137. Red imported fire ants' biology and spread make it economically, technically, and ecologically possible to eradicate them from larger areas.

- A. True
- B. False

138. One proven method of reducing imported fire ant populations in heavily-infested home lawns and ornamental turf is called the "**Two-Step Method**" of fire ant control. Briefly, it's the: 1) once or twice per year broadcast application of a bait product (e.g., Amdro®, Logic®, Award®, or Ascend® and others) and waiting several days to a week before; 2) treating nuisance mounds, using an individual mound treatment, such as a dust, granule, bait or drench insecticide.

- A. True
- B. False

139. Otherwise, wait for the bait treatment to take effect. This method reduces the over-reliance on use of individual mound treatments and is suitable for treating larger areas.

- A. True
- B. False

140. An ideal time to apply bait-formulated fire ant insecticides is from late August through October to allow the baits to reduce fire ant populations over the winter.

- A. True
- B. False

141. The key to using baits is money and chemical usage.

- A. True
- B. False

142. Applied properly and using a fresh bait product, a broadcast application will give 80% to 90% control, rarely 100%. For instance, Amdro® is the fastest acting, giving maximum control in 3 to 6 weeks. Logic® or Award®, when applied late in the year, may take several months to provide maximum control, but will suppress ant colonies for a year or more.

- A. True
- B. False

143. One approach, for example, for heavy imported fire ant infestations is to treat with Amdro® first for fast knockdown, then come back with Logic®/Award® for longer durations control as ants start to re-infest the area some months in the future. Other baits include Siege®, Award®, Ascend®, and Raid® Fire Ant Killer.

- A. True
- B. False

144. Mirex was not an effective ant killer, and it was one of the least persistent compounds ever made.

- A. True
- B. False

145. Mirex belongs to a group of chemicals that have mostly been banned from sale or use. Their ingredients, or their degradation products, accumulated in biological systems.

- A. True
- B. False

146. Over-the-counter baits at consumer retailers are limited to Amdro and Combat (hydramethylnon); Raid Ant Bait (abamectin) - which is now an old product; Spectracide Ant Bait (pyriproxyfen) which is formulated at 1/10th "conventional" formulation concentration and costs 10 times as much to apply as conventionally-formulated products.

- A. True
- B. False

147. Fire ant baits consist of pesticides on processed corn grits coated with soybean oil. Worker ants take the bait back to the colony, where it is shared with the queen, which then either dies or becomes infertile.

- A. True
- B. False

148. Baits currently available include Amdro, Siege, Logic, Award, Ascend, or Raid Fire Ant Killer.

- A. True
- B. False

149. Leaf Cutter ants look like tiny, white apparitions who suddenly appear and seem to disappear just as quickly. Workers are 1/16 inch/1.5 mm in length. The legs, pedicel, gaster, and antennae are pale, almost translucent, in color and the head and thorax are darker. For this reason, the Leaf Cutter ant is also known in some areas as the black-headed ant.

- A. True
- B. False

150. Colonies of Ghost ants tend to be moderate to large in size and multiple queens are present. New colonies are started by "**budding**" where one or more reproductive females, several workers, and possibly some brood (larvae and pupae) migrate to a new nesting site.

- A. True
- B. False

151. Ghost ants' biology is similar to the Argentine ant.
A. True
B. False
152. Ghost ants tend to forage in a more random pattern than does the Argentine ant, so that feeding trails may be more difficult to recognize.
A. True
B. False
153. Ghost ants have a low need for water and will not be found in or around kitchens, baths or other moisture sources.
A. True
B. False
154. Ghost ants have been reported in many areas of the United States, as well as in Canada, Puerto Rico and the Caribbean Islands. They are a well established pest in Florida and Hawaii.
A. True
B. False
155. The introduction of Ghost ants to northern states may have occurred via potted plants shipped from Florida to northern greenhouses. It is also believed that these pests can hitchhike in the luggage of tourists.
A. True
B. False
156. Ghost ants are also found in cold climates and can be a small problem in tropical areas of the world.
A. True
B. False
157. Ghost ants' foraging activity indoors is typically concentrated in the kitchen or bathroom, with a high need of water, although any room can be affected.
A. True
B. False
158. The nesting habits of Ghost ants are similar to Argentine ants.
A. True
B. False
159. Outside, Ghost ants can be found nesting in the soil of potted plants, under stones, under and inside logs and firewood. They also nest in cavities and crevices in trees and shrubs.
A. True
B. False
160. Ghost ants will enter structures, usually by trailing from nests along the foundation or by branches of trees and/or shrubs that contact the structure.
A. True
B. False

161. Ghost ants tend to forage in a random pattern; feeding trails may be difficult to spot. Workers forage from these onto and up the walls of buildings, entering through cracks around doors, windows, and soffits.

- A. True
- B. False

162. The hollows in pool enclosures also seem to be a prime nesting site for Ghost ants.

- A. True
- B. False

163. In kitchens, Ghost ants prefer to forage on sweet items such as packages of marshmallows, syrup, honey, candy and sugar. They will also forage on grease deposits although not as readily as they will on sweets.

- A. True
- B. False

164. Ghost ants' trails are often very easy to see due to the tiny size and pale coloration of these ants.

- A. True
- B. False

165. Ghost ant workers follow scent trails along the edges of structures for protection. They can often be spotted trailing under the edge of carpets and up the sides of the building, searching for entry points.

- A. True
- B. False

166. Ghost ants prefer sweet foods, particularly honeydew secreted by aphids and mealybugs.

- A. True
- B. False

167. Ghost ants will herd aphids and protect them from their natural predators, insuring the safety of their living food source. They are also predacious, attacking living insects, eggs and larvae of flies and butterflies. Indoors, ghost ants will seek sweet food such as candy, fruit and sugar.

- A. True
- B. False

168. Due to their predacious nature ghost ants are a particular problem in butterfly houses and other facilities that raise or store live insects. They will attack the valued insects and will carry off the eggs and larvae of flies and butterflies.

- A. True
- B. False

169. Baiting would be the preferred treatment over typical residual spraying, so you can eliminate the entire Ghost ant colony.

- A. True
- B. False

170. The use of residual sprays or dusts will cause stress on the colonies, causing them to split into sub-colonies that scatter to other areas in the structure. This is also called budding.

- A. True
- B. False

171. After spraying, your problem can be worse than at the beginning. When you bait, you will want a slow acting bait. Quick kill insecticides and baits will only kill the foraging ants, not allowing the foraging ants to take the bait back home to feed the queen, nest workers and brood.

- A. True
- B. False

172. Leaf cutter ants are mounded ants; like fire ants, they establish a mound outside. Found mainly in the United States, in south central and eastern Texas and into parts of western Louisiana.

- A. True
- B. False

173. Leaf cutter ants are also called "**aphids ants**" or "**green ants**".

- A. True
- B. False

174. A leaf cutter ant nest can be quite large, covering up several square feet in area and extend as deep as 3 feet into the ground.

- A. True
- B. False

175. Leaf cutter ants are mainly a rural, agriculture pest, but can be found in subdivisions. Leaf cutter ants usually come to your attention when plants, trees or shrubs are being stripped of their leaves. They usually like to select one type of plant to feed off, ignoring others.

- A. True
- B. False

176. Leaf-cutter ants are major agricultural pests in Central and South America. It has been estimated they do \$1 billion damage per year in North and South America. These ants still cause millions of dollars in crop losses in many South American countries.

- A. True
- B. False

177. Although primarily an agricultural pest, this insect on occasion may invade the home for cereals. In the United States, the Texas leaf-cutting ant occurs in Texas and Louisiana. This ant is believed to cause a total yearly loss of \$5 million in the United States (Mallis, 1960).

- A. True
- B. False

178. Leaf cutter worker ants range from size for 1/16"-to 1/2 ".

- A. True
- B. False

179. Leaf cutter ants are green, with three nodes. The winged reproductives or swarmers produced by the leaf cutter ant colonies are quite big.

- A. True
- B. False

180. Leaf cutter ant females are well over 4 inch long with the males being much smaller. They are yellow and brown.

- A. True
- B. False

181. Leaf cutter ants are relatively large with a smooth body and short legs.

- A. True
- B. False

182. Sometimes, Leaf cutter ants will enter structures, but don't stay long. Look for nest that have high moisture such as creek beds, drainage ditches, and streams. Sometimes you can discover their nest by following the foraging ants' home.

- A. True
- B. False

183. Leaf cutter ant nest will have many entrances with craters of loose soil that has been deposited above. During the summer, workers forage during the night. They will forage in the daytime during the spring and fall unless it is rainy or overcast. A "trail" of leaves can lead you to a nest as well.

- A. True
- B. False

184. Do not try to discover the entrances to the Leaf cutter ant nest for possible treatment. These are too difficult to find

- A. True
- B. False

185. The Leaf cutter ant swarmers often swarm in the night during the months of April or May.

- A. True
- B. False

186. Leaf cutter ants are attracted to lights on buildings and can be found crawling in a large quantity on the buildings following a major swarm. They cause no real damage.

- A. True
- B. False

187. Leaf cutter ants using their scissor-like jaws, completely strip trees and other plants of their foliage, carrying back the leaves to their vast underground nests, where millions of ants live. It is in these chambers that leaf-cutters do something very unusual with the leaves that they bring back to the nest.

- A. True
- B. False

188. The leaves are not eaten; they are chewed into a pulp-like material, which soon sprouts a fungus. This special, mushroom-like fungus serves as the colony's only food.

- A. True
- B. False

189. Leaf cutter ants are very selective about the species of leaves they collect which causes these ants to travel several hundred yards on leaf gathering foraging. The ants leave an invisible scent on the trails they use in order to find their way home.

- A. True
- B. False

190. The Leaf cutter ant nest may cover 3,000 to 4,500 square feet and may be 8 feet or more deep.

- A. True
- B. False

191. A Leaf cutter ant nest has many chambers containing fungus, perhaps two to three dozen, and many dozens of entrances. In addition, the nest of some species of leaf cutter ants may contain 1,000,000 or more workers.

- A. True
- B. False

192. The Argentine ant lives in unusually cooperative super colonies that span states, as in California, and whole regions, like the entire Mediterranean coast.

- A. True
- B. False

193. The Argentine ant is most often confused with the odorous house ant, but the node of the Argentine ant has a sharp, pointed peak, while that of the odorous house ant is flat in shape and is hidden by the gaster.

- A. True
- B. False

194. The Argentine ant is a one node, small, shiny, white ant with three sizes of worker.

- A. True
- B. False

195. Argentine ant workers are usually about 1/12 to 1/8 inch long.

- A. True
- B. False

196. The Argentine queen ants are much larger, sometimes reaching 7/8 inch in length.

- A. True
- B. False

197. Argentine ants nest outdoors under logs, concrete slabs, debris and mulch. Argentine ants build very large colonies and move slowly. During winter months, this ant will move outdoors.

- A. True
- B. False

198. Argentine Ants may develop super huge colonies containing thousands of workers and with only one queen.

- A. True
- B. False

199. The Argentine ant species may be one of the most easiest to control. One reason these ants are so successful is due to the fact that worker ants of individual colonies are friendly towards one another, and colonies will join together to form supercolonies.

- A. True
- B. False

200. An Argentine ant colony can suffer the loss of 10% of the colony's individuals, and the colony can still survive and rebuild. Several significant natural enemies of this species currently exists in the United States.

- A. True
- B. False

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