

# STUDY GUIDE

## A Guide to Pocket Gophers

### Identification, Biology and Control Methods

Follow along with the Guide and fill in all blanks with their appropriate answers. If you feel you missed or skipped a question, go back to the section that contains that answer. Once completed, take the Quiz at the end of each presentation section. Feel free to refer to this Study Guide as needed.

### Identification

1. Pocket gopher identification can be done by observing their \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

### Physical Description

2. The pocket gopher's use their fur lined external cheek pouches, or pockets to \_\_\_\_\_ and \_\_\_\_\_.
3. Pocket gophers range in length from \_\_\_\_ to \_\_\_\_ inches.
4. The pocket gopher's lips close behind its four large incisor teeth, keeping \_\_\_\_\_ out of its mouth while using them \_\_\_\_\_.

### Behavior

5. Pocket gophers are almost completely \_\_\_\_\_.
6. Pocket gophers only travel above when young are dispersing to find \_\_\_\_\_.

### Burrows

7. Mounds are usually \_\_\_\_\_ shaped.
8. Pocket gophers fail to produce mounds at times and in turn backfill \_\_\_\_\_ with the excavated soil.
9. Burrow entrances are plugged to \_\_\_\_\_ and stabilize \_\_\_\_\_ and \_\_\_\_\_ within the burrow system.
10. Food is stored near the \_\_\_\_\_ and in other chambers.

### Habitat

11. Pocket gophers are typically found in \_\_\_\_\_ and \_\_\_\_\_.
12. Pocket gophers are most abundant where there is ample \_\_\_\_\_ and \_\_\_\_\_.

### **Damage**

13. Pocket gophers often invade \_\_\_\_\_.
14. Burrows have a weakening effect on \_\_\_\_\_ and \_\_\_\_\_.
15. Underground cables are sometimes \_\_\_\_\_ and \_\_\_\_\_.
16. Girdling of young trees occurs especially during the \_\_\_\_\_ when green vegetation is scarce and the ground is dry.

### **Biology**

17. A base knowledge of the pocket gopher's biological traits can help in determining proper \_\_\_\_\_ for control method application in order to avoid inappropriate use.

### **Diet**

18. Pocket gophers feed on \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and even \_\_\_\_\_ at the base of trees.
19. Food sources consist mainly of the \_\_\_\_\_ parts of plants, particularly the succulent portions.
20. Forbs are often cut back \_\_\_\_\_ or pulled down into the \_\_\_\_\_.
21. Stems are cut into short segments for easy transport in the gopher's \_\_\_\_\_ and deposited into storage chambers of the burrow.

### **Breeding**

22. Breeding occurs primarily between \_\_\_\_\_ and \_\_\_\_\_.
23. In irrigated areas with continuous green forage, breeding takes place \_\_\_\_\_.
24. Females can bear up to \_\_\_\_\_ litters in one year.

25. Litter size averages \_\_\_\_ to \_\_\_\_ young.
26. Frequency of pregnancies increases with the females' \_\_\_\_\_ and \_\_\_\_\_.
27. The young remain in the nest for several \_\_\_\_\_.

### **Sleeping Habits/Hibernation**

28. Pocket gophers are active \_\_\_\_\_ and \_\_\_\_\_, year round.
29. Pocket gophers do not \_\_\_\_\_.

### **Control Methods**

30. Because of the nature of pocket gopher damage, successful control is dependent upon \_\_\_\_\_ and \_\_\_\_\_.

### **Exclusion**

31. Due to its expense and limited practicality, exclusion is only effective for protecting \_\_\_\_\_ areas.
32. Small areas such as bulb beds may be protected from pocket gophers by complete underground screening with \_\_\_\_\_.
33. Larger wire baskets can be made to accommodate fruit trees, but can interfere with \_\_\_\_\_.
34. In small-scale operations, \_\_\_\_\_ can be successful.

### **Habitat Modification**

35. When irrigated croplands and orchards are flooded most pocket gophers \_\_\_\_\_ in burrows, while others are \_\_\_\_\_ where they are susceptible to predation.
36. Varying crop types can assist in discouraging gophers. For example pocket gophers do not like large rooted varieties of \_\_\_\_\_.
37. Using a crop rotation scheme of grain crops and alfalfa creates a less favorable habitat for pocket gophers because the underground structures do not supply as much \_\_\_\_\_ food.
38. A 50 foot buffer of grain around hay fields produces a wall of unsuitable habitat for pocket gophers minimizing into the field.

39. Chemical or mechanical control of forbs can limit \_\_\_\_\_  
\_\_\_\_\_ and reduce pocket gopher  
\_\_\_\_\_ in rangeland situations.

### **Fumigants**

40. When \_\_\_\_\_ are lit  
and placed in pocket gopher burrows, gas intended to overcome the  
gophers is released.

41. Burrow system extent, leakage of gas through the soft soil of lateral  
tunnels, closeness of main runs to the surface, and the fact that gophers  
quickly block burrows when smoke or poisonous gas is detect making  
ignitable gas cartridges \_\_\_\_\_.

### **Aluminum Phosphide**

42. Aluminum Phosphide is a \_\_\_\_\_ pesticide  
requiring a permit for use in California.

43. Aluminum Phosphide has a \_\_\_\_\_% success rate for pocket gopher control  
under proper soil conditions.

44. Place the \_\_\_\_\_ in the  
main tunnel through a probe hole.

### **Magnacide "H"**

45. Magnacide H is not generally used for pocket gopher control with recent  
test results indicating that this substance is \_\_\_\_\_.

### **Chemical Baits**

#### **Strychnine**

46. Strychnine treated bait is the most \_\_\_\_\_ rodenticide used  
for pocket gopher control.

47. This bait is lethal with a \_\_\_\_\_ feeding and typically found  
in grain form.

48. \_\_\_\_\_ follow product label directions.

#### **Zinc Phosphide**

49. Zinc Phosphide is a \_\_\_\_\_ pesticide  
available in pellet and grain form.

50. Always follow product \_\_\_\_\_.

## Anticoagulants

51. Anticoagulant baits are preferred for use in areas where \_\_\_\_\_ and \_\_\_\_\_ may be present.
52. Anticoagulant baits require ten times the amount as strychnine treated bait and \_\_\_\_\_ feedings are necessary for effective control.

## Hand Baiting

53. Hand baiting is also known as a \_\_\_\_\_ method and is used to locate main runways by depositing bait underground where pocket gophers will find it.

## Anticoagulant Bait Blocks

54. Paraffin bait bars or blocks containing anticoagulants are available for pocket gopher control, but use patterns \_\_\_\_\_ so always follow label instructions carefully.
55. When using bait blocks place in \_\_\_\_\_ locations per pocket gopher system then close the openings.
56. Bait blocks are weather resistant and should be effective for \_\_\_\_\_ periods.

## Mechanical Burrow Builder Baiting

57. A mechanical burrow builder is effective and economical for infestations that cover \_\_\_\_\_ areas, creating artificial gopher tunnels and places bait within them.
58. Bait is dropped automatically at intervals \_\_\_\_\_ to \_\_\_\_\_ inches into the tunnel.
59. Between \_\_\_\_\_ and \_\_\_\_\_ pounds of bait treats one acre of infested property.
60. The mechanical burrow builder should not be used \_\_\_\_\_ since pocket gophers can use the artificial tunnels to invade fields when populations are not already established in the location.

## Trapping

61. Trapping is \_\_\_\_\_ intensive and \_\_\_\_\_ consuming.

62. Two common traps are the \_\_\_\_\_ Trap and the \_\_\_\_\_ Trap.

### Two Pronged Pincher Trap

63. Always set pincher traps in pairs facing \_\_\_\_\_ directions ensuring the pocket gopher will intercept the trap when traveling through the burrow.

64. Wire pincher traps to a stake for easy re-location and to keep them from being \_\_\_\_\_.

65. Exclude light from the burrow. If light enters the burrow, the gopher may plug it with \_\_\_\_\_, filling the traps and making them \_\_\_\_\_.

66. If a gopher is not caught within \_\_\_\_ or \_\_\_\_ days, reset traps in a different location.

### Box Trap

67. Box traps are generally easier to set than pincher type traps, but are larger and require more \_\_\_\_\_.

68. Contrary to popular belief, \_\_\_\_\_ on traps has no apparent effect on trapping success.

### Alternative Methods

#### Frightening

69. This method is \_\_\_\_\_.

70. Sounds, vibrations, electromagnetic devices and other frightening methods have not been proven \_\_\_\_\_ in driving gophers from an area, keeping them out or preventing their subsequent damage to property.

#### Repellents

71. Repellents are \_\_\_\_\_ in protecting areas from pocket gopher infestation.

72. The plant commonly known as Gophernut or gopher plant (*Euphorbia lathyris*) has been suggested as a repellent, but \_\_\_\_\_ of its effectiveness has not been produced.