Integrated Approach to Controlling Pocket Gophers in Alfalfa

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Pocket Gopher

- Is the primary wildlife pest for alfalfa in California.
- Cause millions of dollars of damage annually to CA alfalfa.
- Damage includes consumption of plant, damage to buried irrigation lines, and abundant burrow openings.

Current Control Strategies

- Currently, we focus on an integrated approach that utilizes a number of strategies and tools to control pocket gophers.

Importance of Biology/Ecology

- Understanding the biology and ecology of gophers and cropping systems will guide management decisions.
- Example:

  - soil moisture for mounding detection and fumigation

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Management Strategy

- Identify the vertebrate pest species.

- Assess options for managing this species.

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Management Strategy

- Develop and implement the management plan you deem most appropriate.
- Monitor after implementation of management actions to determine effectiveness and to assess potential reinfestations.

Species Identification (Pocket Gophers)

- Burrowing rodent about 6-8 in long; rarely seen above ground.

- Gopher mounds are plugged and often fan-shaped.

Assessing Options

- How bad is the infestation?
- Is it bad enough to warrant control?

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Assessing Options

- What time of year is it?
- What are the different costs for potential treatments?

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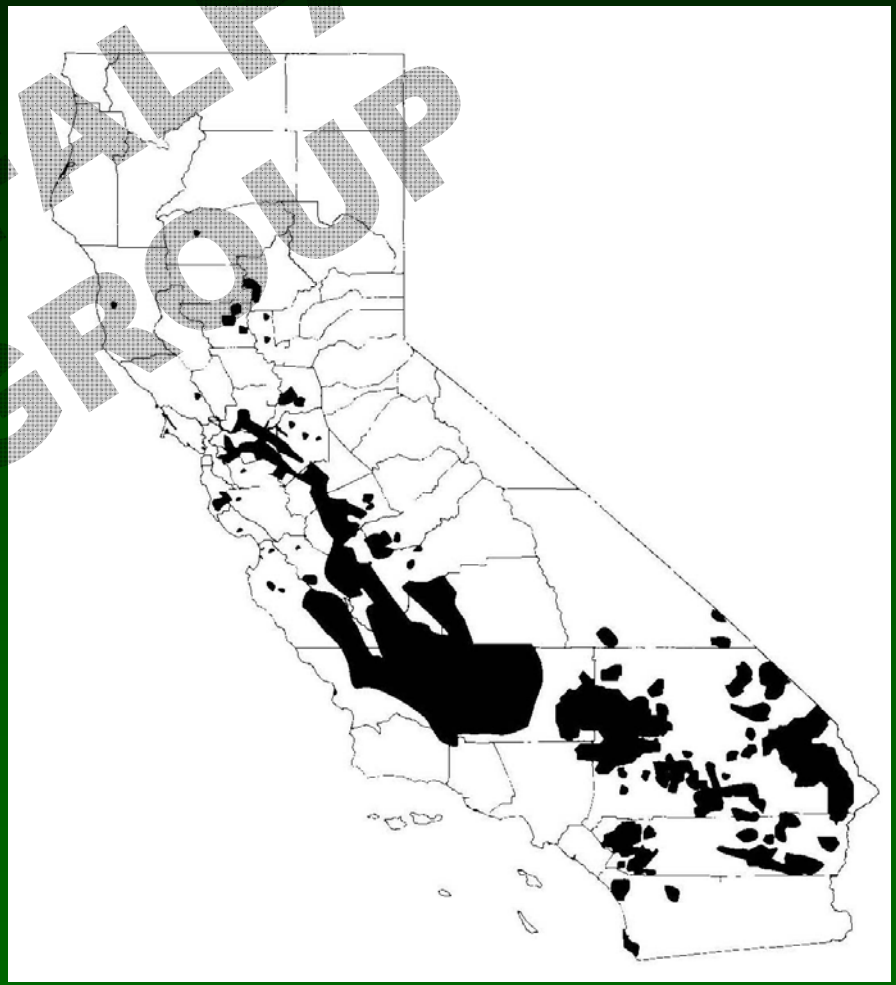
Baiting	Rodenator	Trapping
$420/acre	$396/acre	$252/acre

Assessing Options

- Are endangered species potentially present in your area? Consult your county Ag Commissioner to find out.



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What Control Options are Available?

	Habitat modification	Baiting	Burrow fumigation	Trapping	Exclusion	Repellent	Frightening	Shooting
Pocket gopher	?	X	X	X				

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Control Options—Biocontrol

- Natural predators have been used to control gopher populations.
- Owl boxes are inconclusive at best.
- Gopher snakes kill a few but are unlikely to control populations.

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Control Options—Habitat Modification

- Involves altering habitat or soil to reduce the desirability for pests.
- Example:
  - deep ripping to remove gopher burrow systems.
  - control weeds to reduce food sources for gophers.

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Control Options—Trapping

- Effective for control of gophers.

- There are many different kinds of traps but all fall into 2 categories:
  - Kill traps
  - Live traps

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Control Options—Trapping

Pocket gophers

- Has many positive attributes including:
  - knowledge that you killed the target animal.
  - no use of toxic chemicals.
  - available for use in organic setting.
  - can be efficient and economical once user becomes proficient at trapping.
- Two main kinds of traps: pincers and squeeze-type box traps.

Baiting	Rodenator	Trapping
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Control Options—Baiting

- Involves use of poison baits to control vertebrate pests.
- There are restricted use and non-restricted use baits.

	Anticoagulants	Zinc phosphide	Strychnine
Pocket gophers	X	X	X

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Control Options—Baiting

Pocket gophers

- Strychnine works best.
- Use probe to find tunnel.
- Dispense bait in tunnel.

Control Options—Fumigation

- Involves use of poison gas in burrows to control gophers.
- Works best when soil moisture is high (late winter early spring for gophers).
- Fumigants should not be used around buildings.

Control Options—Fumigation

Gas cartridges

- Not effective for gophers.

Aluminum phosphide

- Tablets can be used for gophers.
- Is a restricted use pesticide.

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Monitoring

- Regularly check for sign of gophers (e.g., mounds, feeder holes).
- Follow-up control methods can be used to eliminate individuals that were not removed during initial control efforts.

Questions?
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