

# Completing the knowledge cycle: Deriving IPM knowledge directly from practitioners on working landscapes

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California Invasive Plant Council  
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# Completing the knowledge cycle...

**Purpose:** Leverage the largely untapped collective knowledge of IPM practitioners across the state through synergistic engagement activities (workshops, surveys, semi-structured interviews, and directed research).

## Goals:

1. Understand how practitioners make decisions about designing and implementing approaches
2. Identify factors contributing to success or failure
3. Understand and describe how to strengthen linkages between IPM in academic research and field application on rangelands

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# Deriving knowledge from on-the-ground managers...

*“Knocking Out Noxious Weeds on Rangelands” workshops*

- Land managers
- Ranchers
- Consultants
- Agency professionals
- Non-governmental organization staff

**306 attendees**



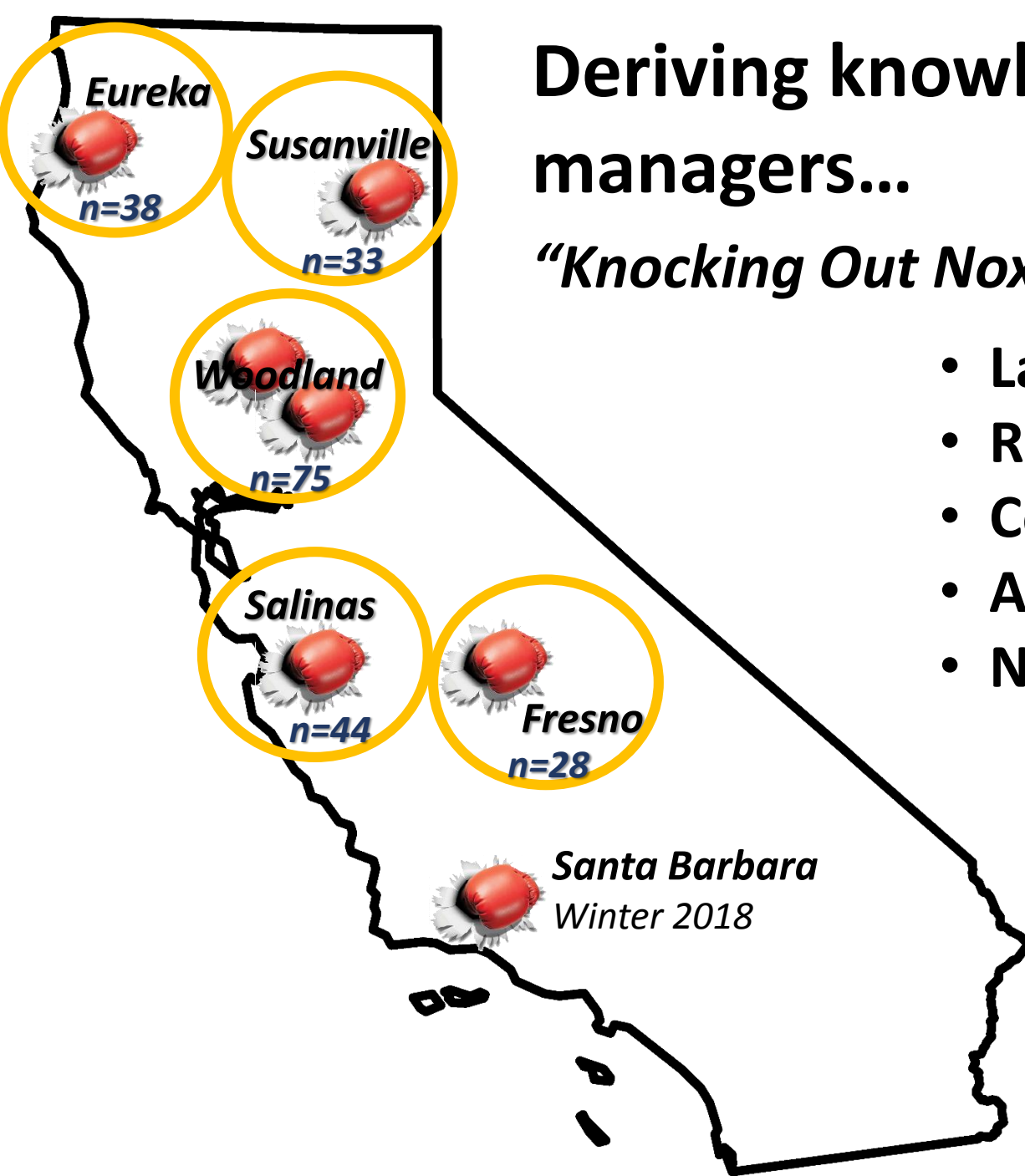
# Deriving knowledge from on-the-ground managers...

*“Knocking Out Noxious Weeds on Rangelands” workshops*

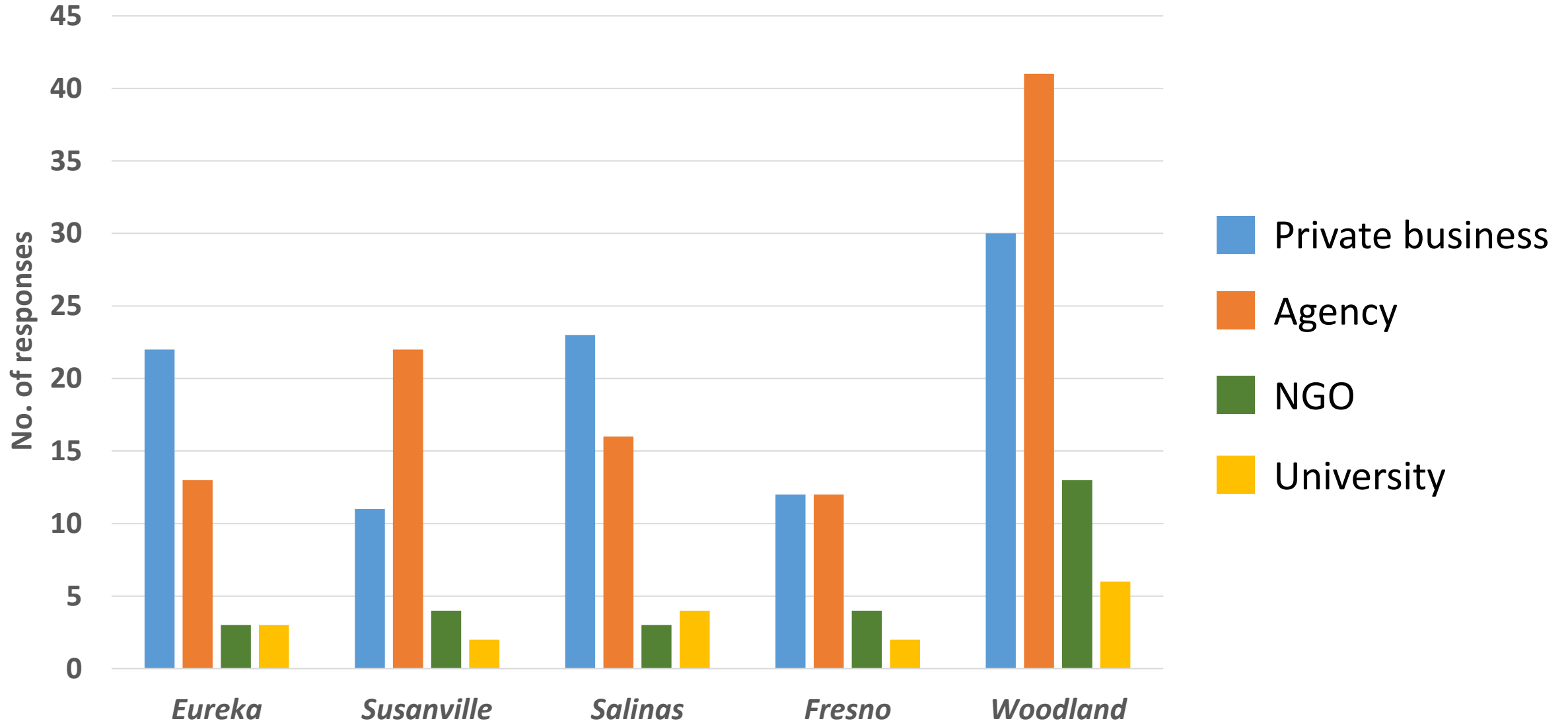
- Land managers
- Ranchers
- Consultants
- Agency professionals
- Non-governmental organization staff

**218 Responses**

**83% response rate**

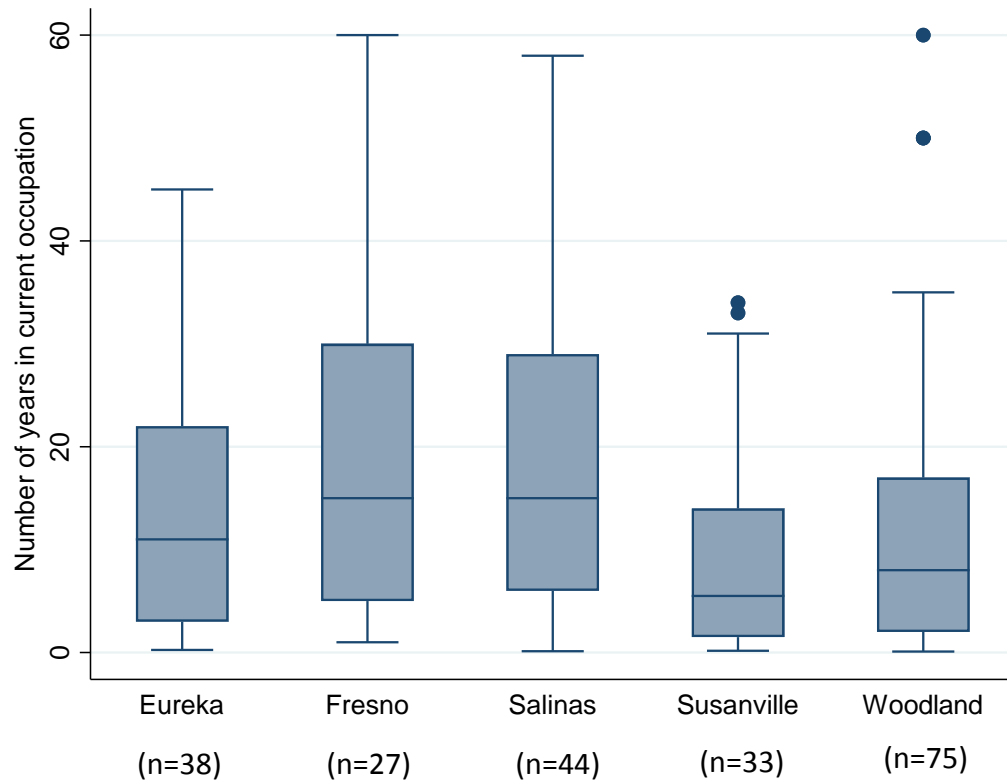


# ***Workshops - “Knocking Out Noxious Weeds on Rangelands”***

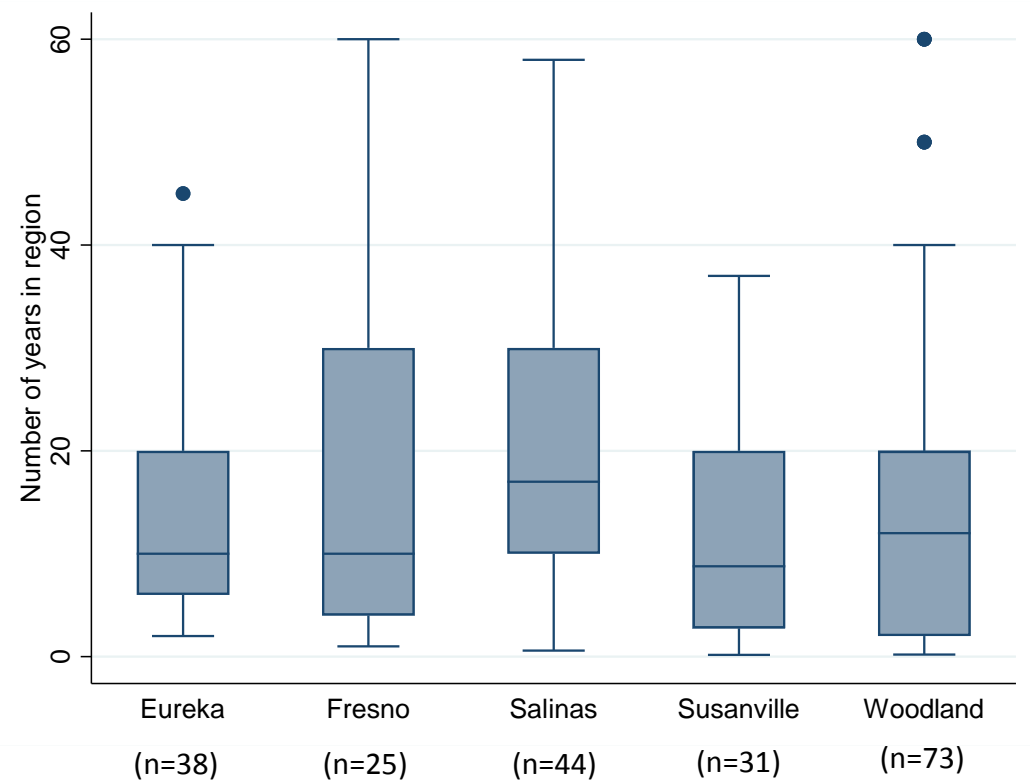


# Workshops - “Knocking Out Noxious Weeds on Rangelands”

*Participants’ current professional experience*



*Participants’ experience in region*



# ***Workshops - “Knocking Out Noxious Weeds on Rangelands”***

***Approximate areas (acres) of land you have direct management on...***

|            | <b>Min acres</b> | <b>Mean acres</b> | <b>Max acres</b> |
|------------|------------------|-------------------|------------------|
| Salinas    | 10               | 20,516            | 330,000          |
| Eureka     | 0                | 79,944            | 1,900,000        |
| Susanville | 0                | 576,672           | 4,032,000        |
| Fresno     | 20               | 31,502            | 448,000          |
| Woodland   | 0                | 13,860            | 200,000          |

(n=155)

# ***Workshops - “Knocking Out Noxious Weeds on Rangelands”***

## ***Type of influence on weed management decisions...***

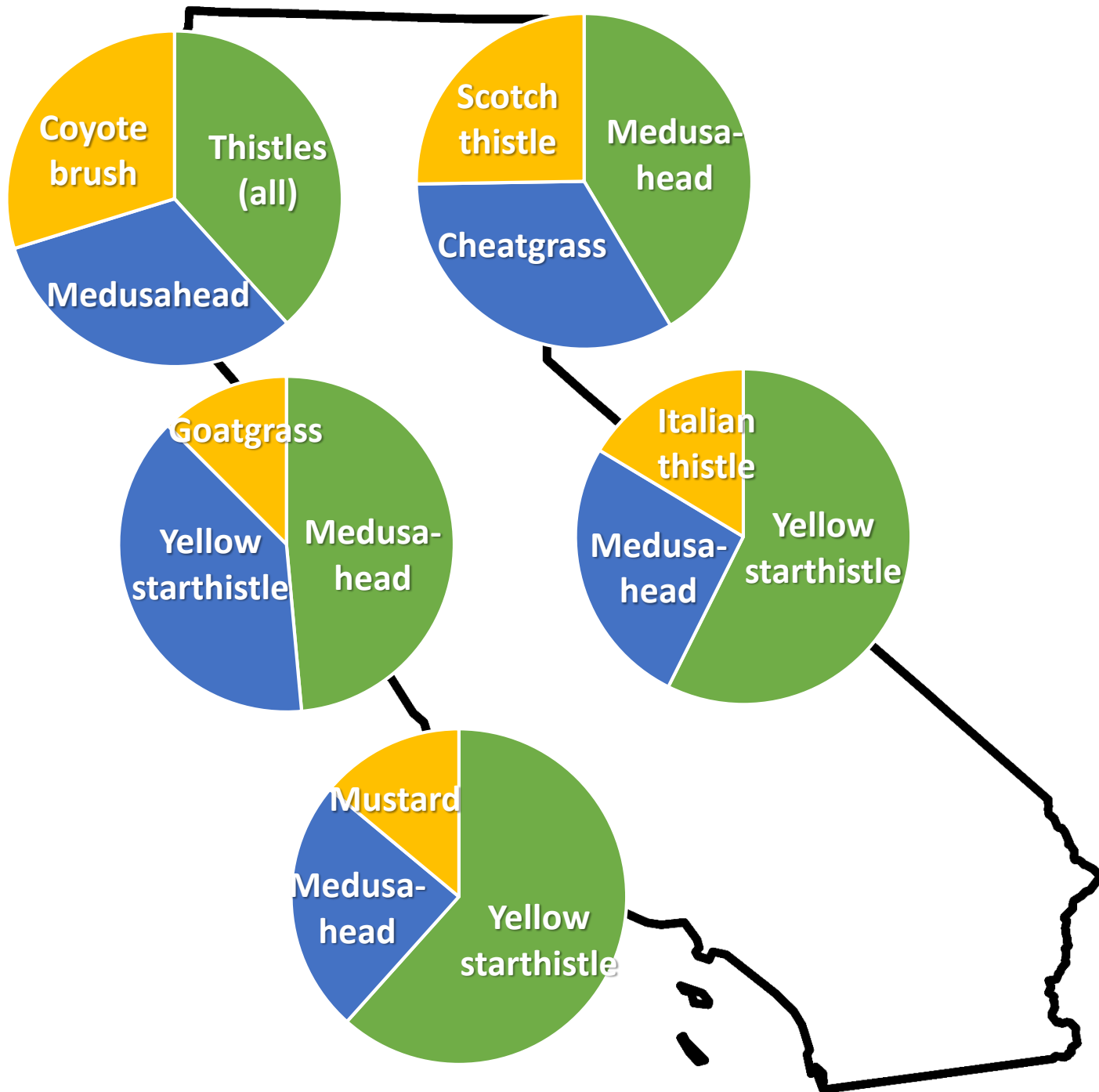
|            | <b>None</b> | <b>A little</b> | <b>Some</b> | <b>A lot</b> | <b>Primary</b> |
|------------|-------------|-----------------|-------------|--------------|----------------|
| Salinas    | 2%          | 7%              | 27%         | 32%          | 32%            |
| Eureka     | 8%          | 11%             | 11%         | 54%          | 16%            |
| Susanville | 0%          | 6%              | 33%         | 42%          | 18%            |
| Fresno     | 0%          | 18%             | 25%         | 25%          | 32%            |
| Woodland   | 1%          | 8%              | 31%         | 33%          | 27%            |

(n=216)



# What are your top 3 most problematic weeds?

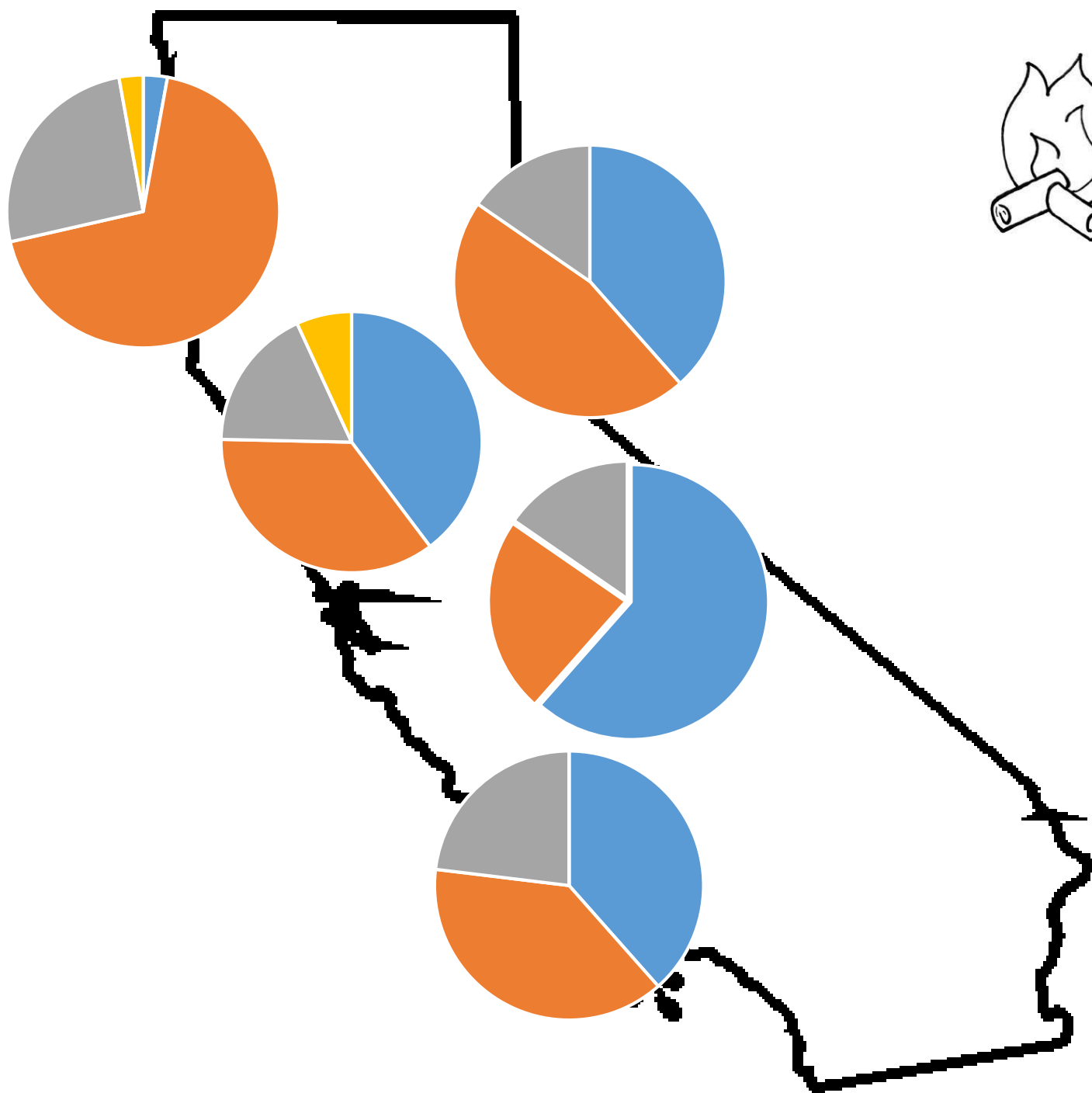
- #1 rank overall
- #2 rank overall
- #3 rank overall





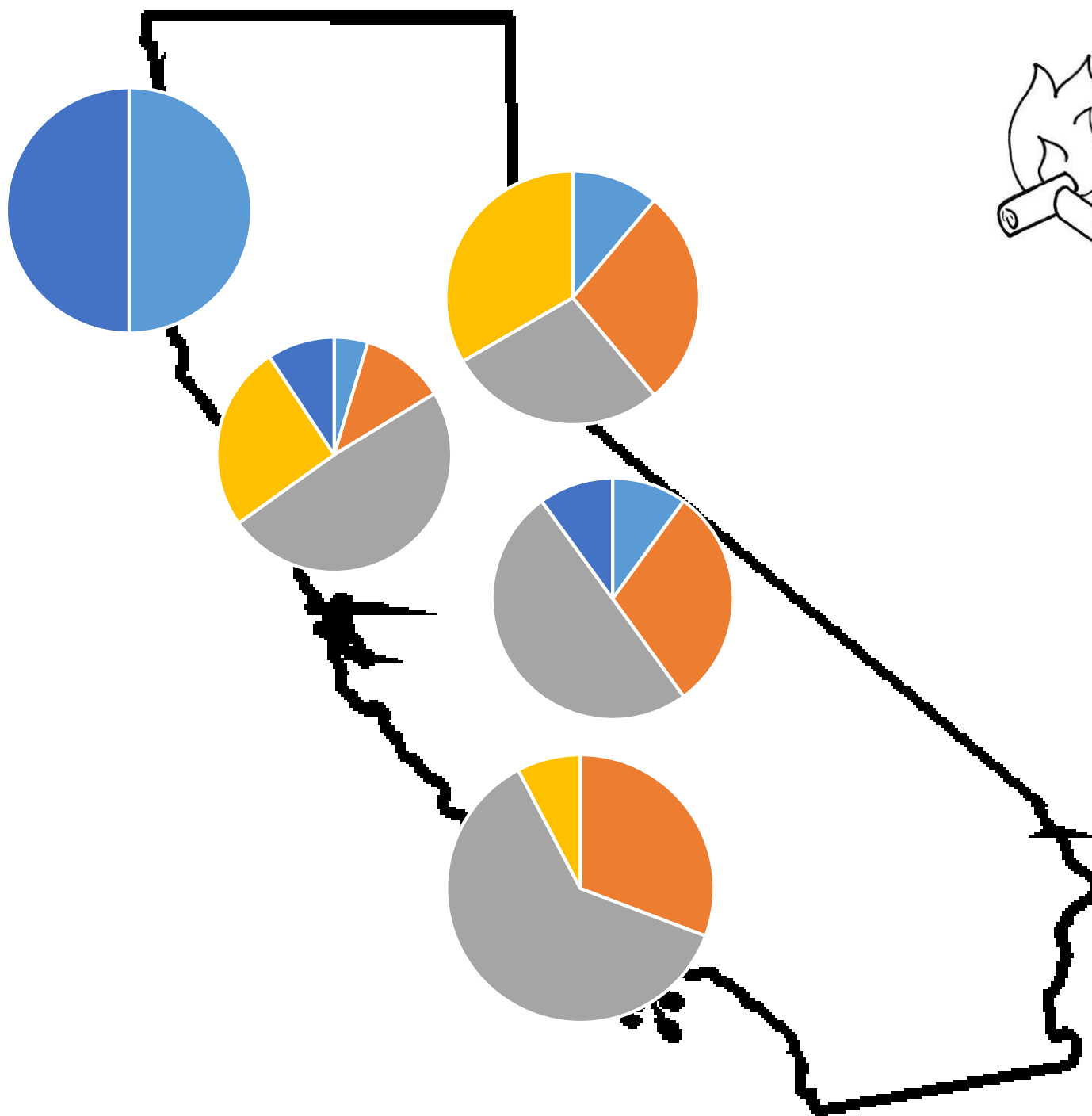
How often do you use prescribed fire to manage weeds?

- Never
- Rarely
- Sometimes
- Often
- Always





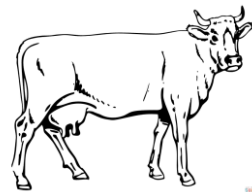
What is your success in controlling weeds with fire?



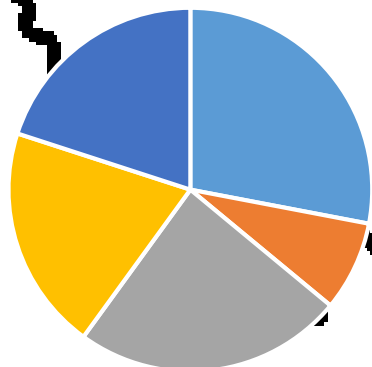
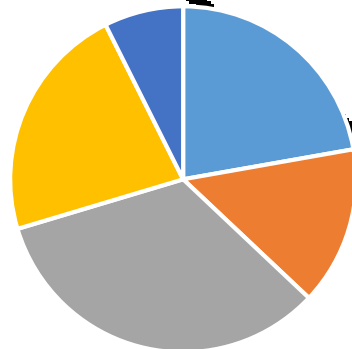
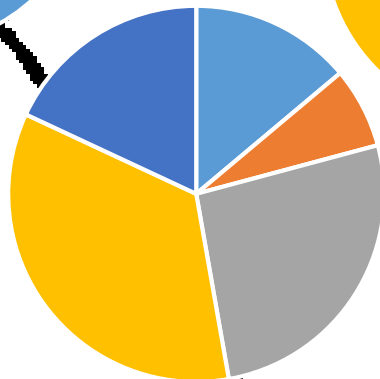
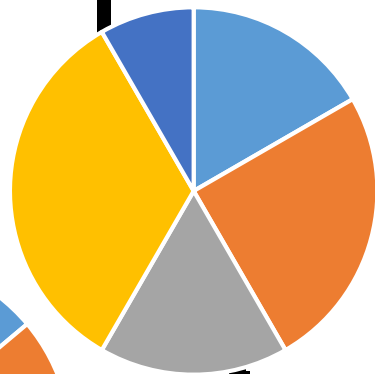
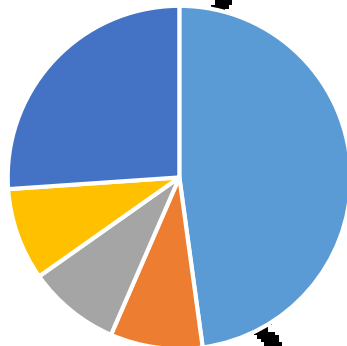


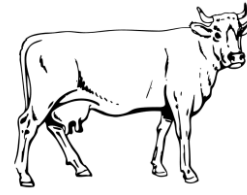
What are your main concerns about using prescribed fire to manage weeds?

| Reason | Eureka                       | Fresno                       | Salinas                      | Susanville                      | Woodland  |
|--------|------------------------------|------------------------------|------------------------------|---------------------------------|---|
| #1     | Permitting                   | Permitting                   | Permitting                   | Loss of control of fire         | Permitting  |
| #2     | Neighbors+ public perception | Loss of control of fire      | Loss of control of fire      | Other                           | Loss of control of fire/ Neighbors+ public perception (tie) |
| #3     | Loss of control of fire      | Neighbors+ public perception | Neighbors+ public perception | Weeds not adequately controlled | Lack of experience/ other (tie)                             |

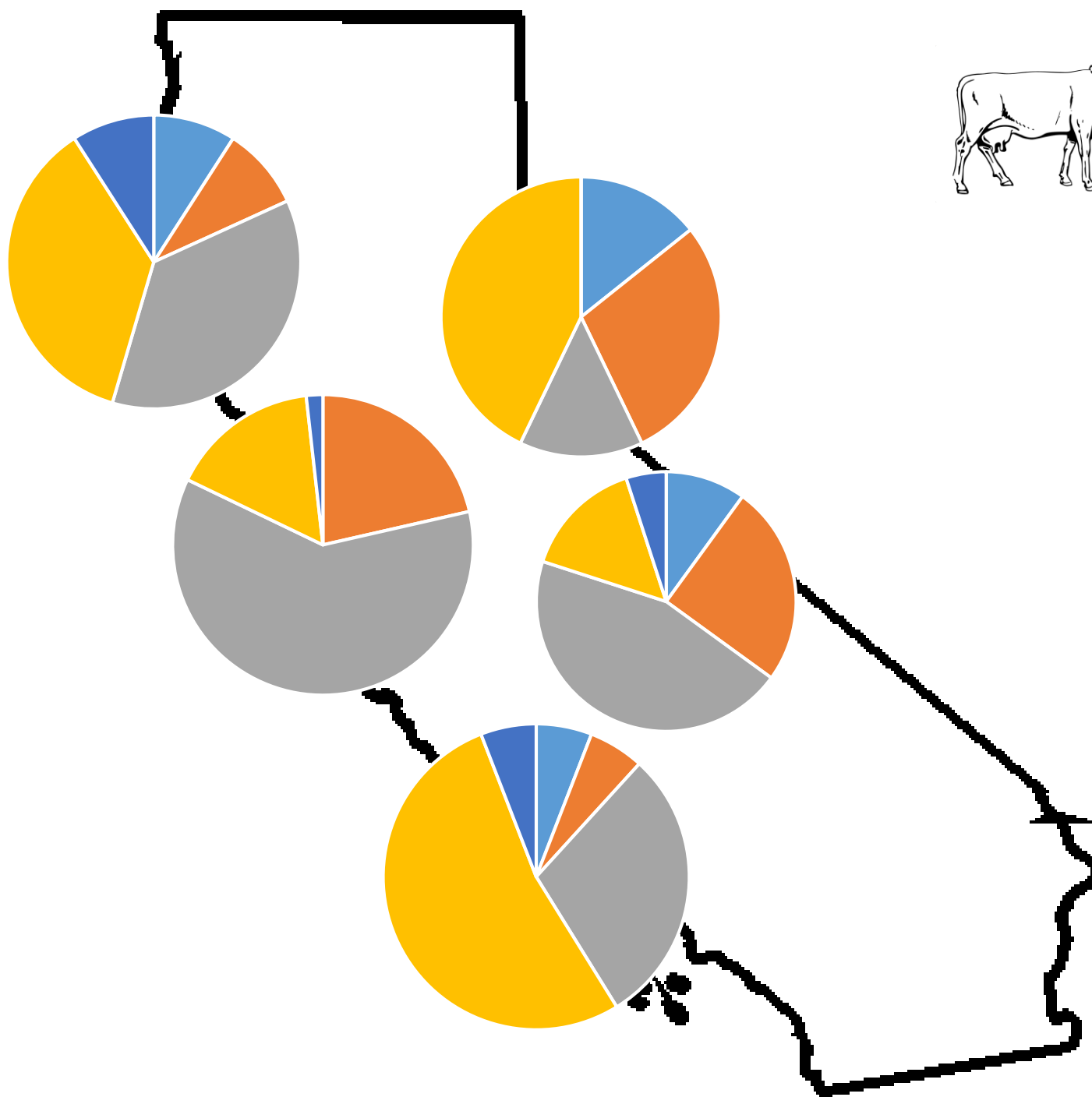


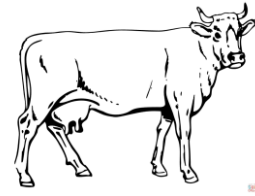
How often do you use grazing to manage weeds?





What is your success in controlling weeds with grazing?



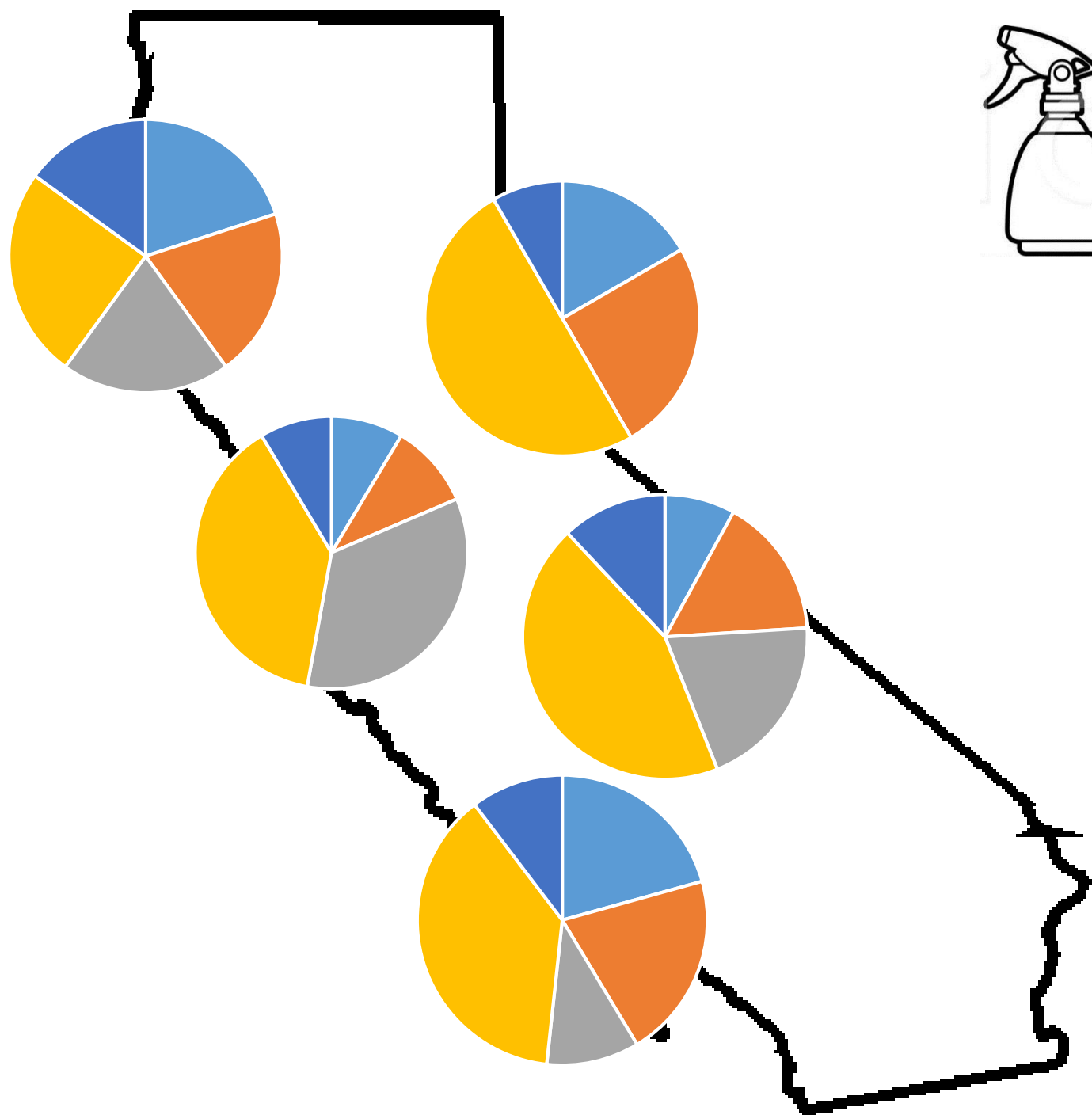


# What are your main concerns about using grazing to manage weeds?

| Reason | Eureka                                  | Fresno                              | Salinas                            | Susanville   | Woodland                          |
|--------|---|-------------------------------------|------------------------------------|--|-----------------------------------|
| #1     | Poor palatability/<br>toxic weeds       | Weeds not adequately controlled     | Poor palatability/<br>toxic weeds  | Water availability   | Weeds not adequately controlled   |
| #2     | Other                                   | Poor palatability/<br>toxic weeds   | Weeds not adequately controlled    | Weeds not adequately controlled                                | Poor palatability/<br>toxic weeds |
| #3     | Unintended effects +<br>Predators (tie) | Water availability<br>+ other (tie) | Access to animals<br>+ Other (tie) | Poor palatability/<br>toxic weeds<br>+ Forage quality<br>(tie) | Water availability                |

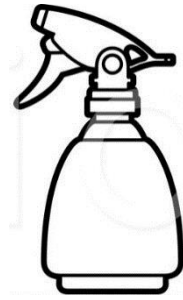


How often do you use herbicides to manage weeds?

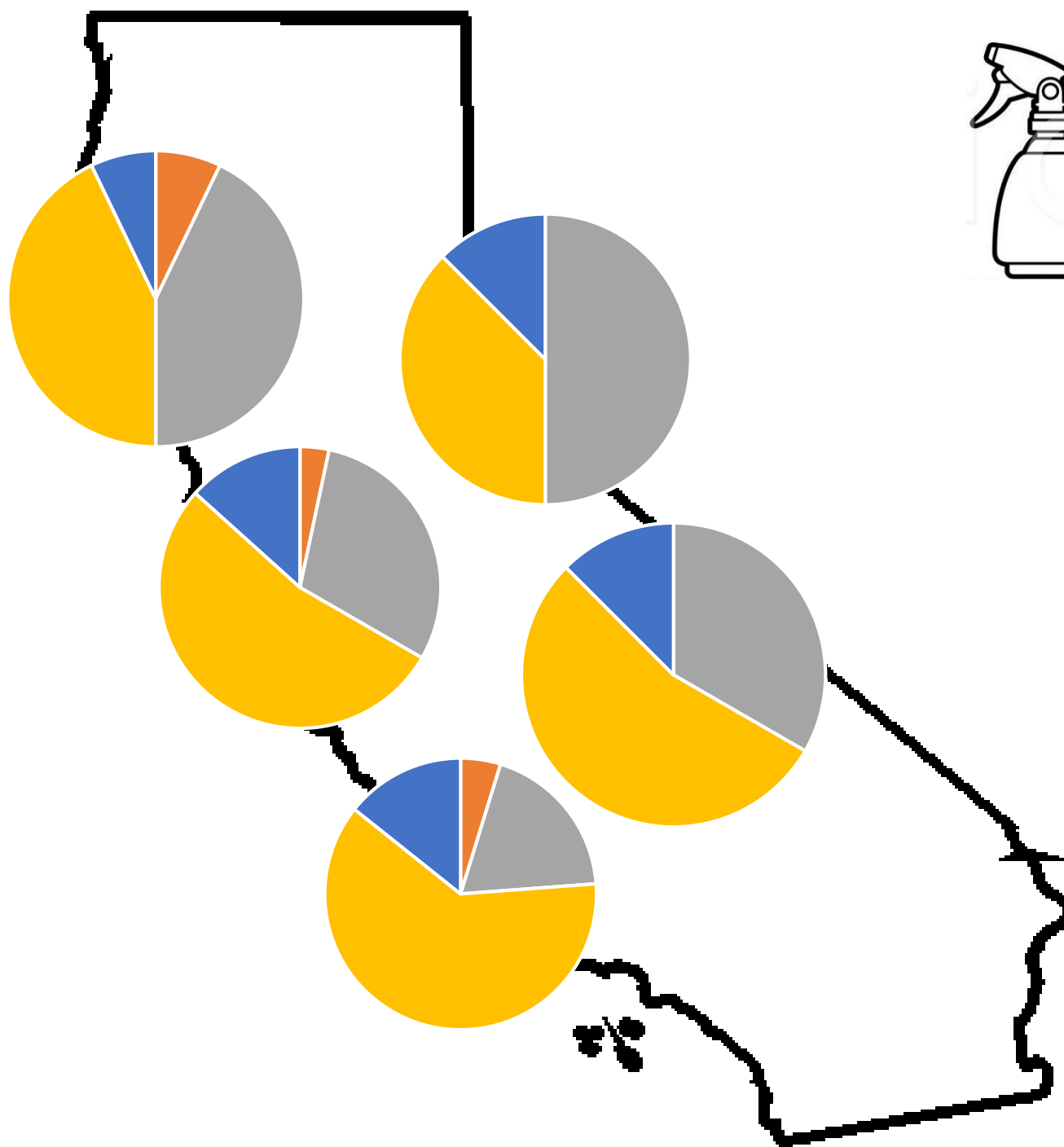


- Never
- Rarely
- Sometimes
- Often
- Always





What is your success in controlling weeds with herbicide?



- No Good
- Poor
- Ok
- Good
- Great



Which herbicides do you use most often?

| Most used | Eureka               | Fresno               | Salinas              | Susanville              | Woodland                    |
|-----------|----------------------|----------------------|----------------------|-------------------------|-----------------------------|
| #1        | Glyphosate (Roundup) | Glyphosate (Roundup) | Glyphosate (Roundup) | Glyphosate (Roundup)    | Glyphosate (Roundup)        |
| #2        | Imazypyr             | Milestone            | Milestone            | Telar + Milestone (tie) | Milestone + Transline (tie) |
| #3        | 2, 4-D               | Transline            | 2, 4-D               | 2, 4-D                  | Garlon                      |



What are your main concerns about using herbicide to manage weeds?

| Reason | Eureka                                     | Fresno                       | Salinas                       | Susanville                                | Woodland                      |
|--------|--|------------------------------|-------------------------------|---|-------------------------------|
| #1     | Effects on non-target plants               | Cost                         | Effects on non-target plants  | Cost + Effects on non-target plants (tie) | Effects on non-target plants  |
| #2     | Other                                      | Effects on non-target plants | Neighbors / public perception | Neighbors / public perception             | Cost                          |
| #3     | Cost + Neighbors / public perception (tie) | Permitting                   | Cost                          | Permitting                                | Neighbors / public perception |

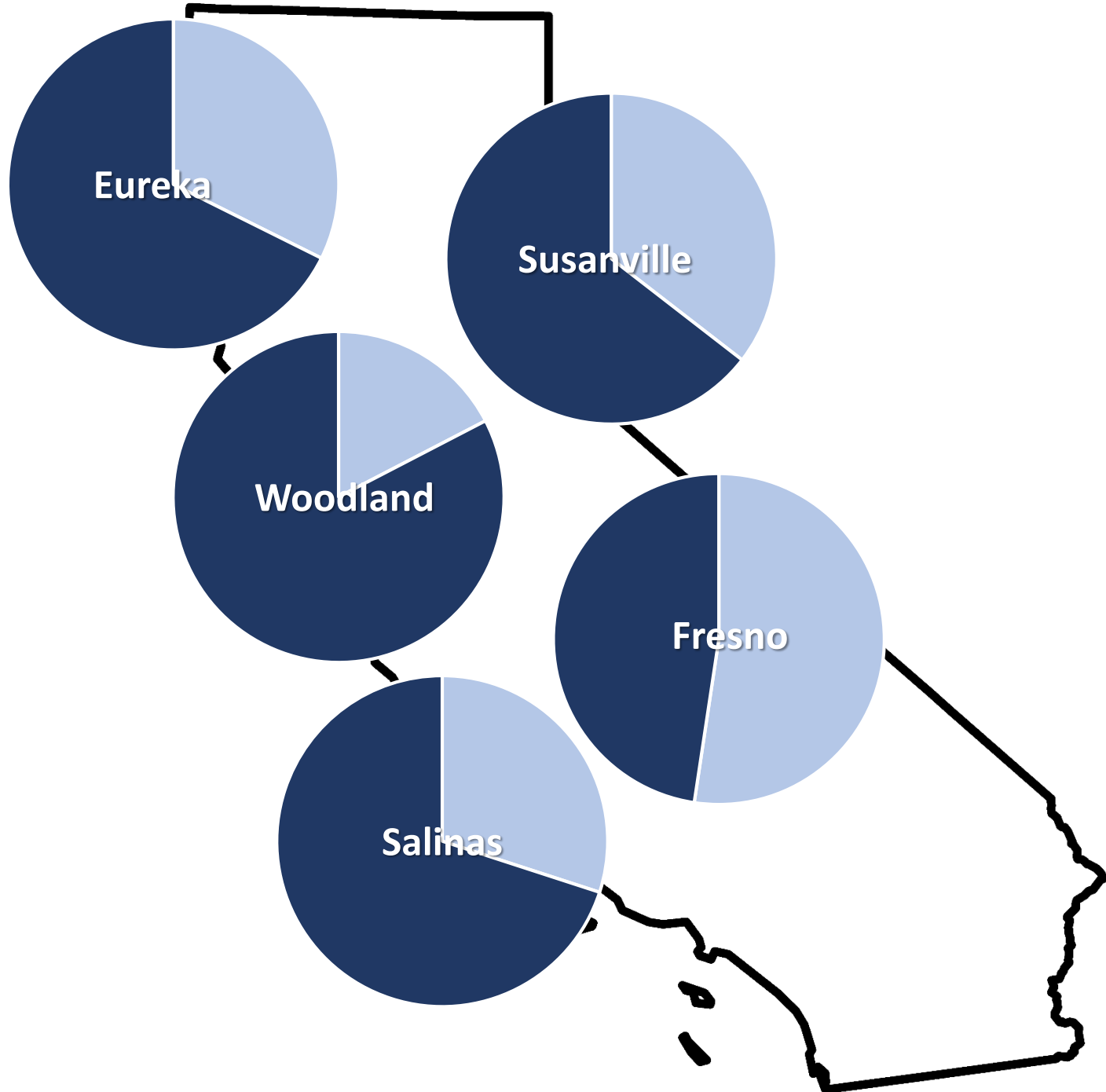


## ***Do you practice any IPM strategies?***

*(IPM is a strategy of managing weeds and other pest by combining treatments that work together, such as grazing followed by reseeding, or burning followed by herbicides.)*

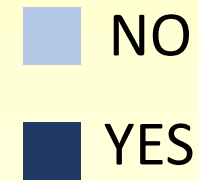
NO

YES



## ***Do you practice any IPM strategies?***

*(IPM is a strategy of managing weeds and other pest by combining treatments that work together, such as grazing followed by reseeding, or brining followed by herbicides.)*



# ***Next steps.....***

- **One more workshop in Southern CA (winter 2018)**
- **Complete data analyses for all 7 workshops**
- **Transcribe and analyze interviews**
- **Evaluate challenges and opportunities**
- **Identify emerging research and Extension priorities**



# Acknowledgements

Joe DiTomaso\*

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Kurt Hembree\*

John Madsen

Fletch Nelson

Josh Davy\*

Jeff Stackhouse\*

George Severson

Sidney Hilton

John Summers

Laura Snell\*

David Lile\*

Beth Leger

Jodi Aceves

Tom Getts\*

Steve Orloff\*

Rebecca Ozeran\*

*All 316 participants!*

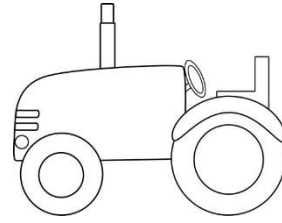


**Tracy Schohr**

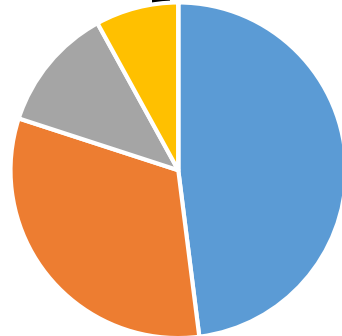
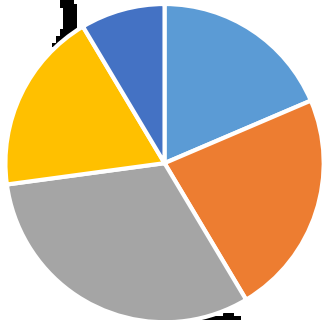
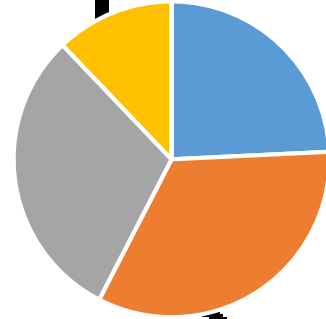
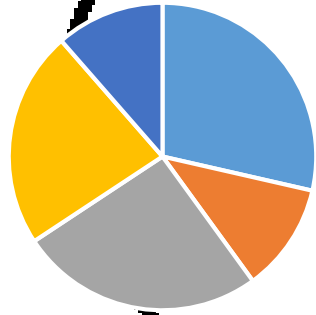
**[tk schohr@ucdavis.edu](mailto:tk schohr@ucdavis.edu)**



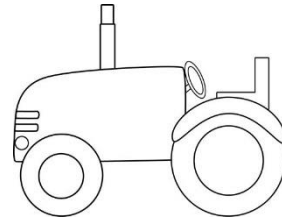




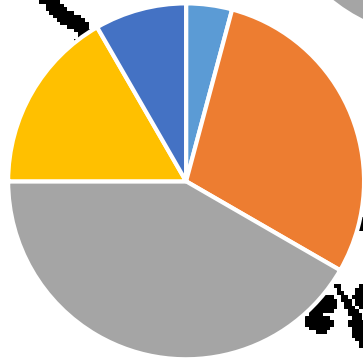
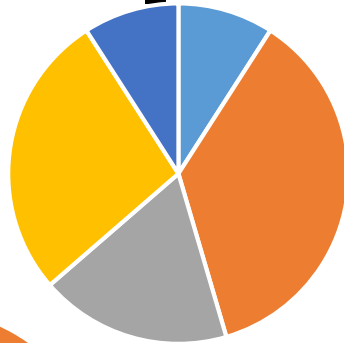
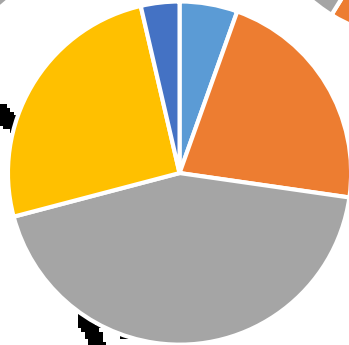
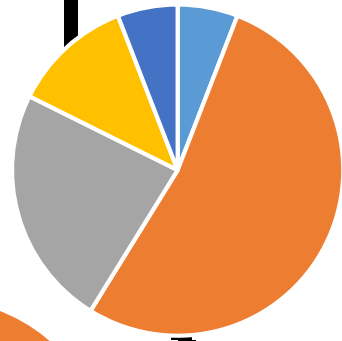
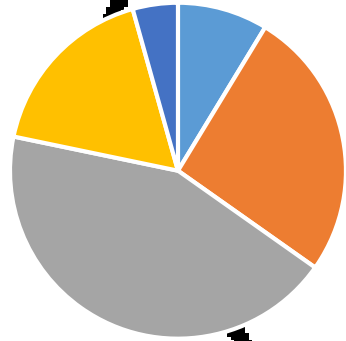
How often do you use seeding to manage weeds?



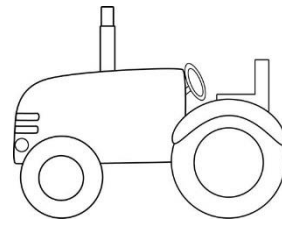
- Never
- Rarely
- Sometimes
- Often
- Always



What is your success in controlling weeds with seeding?



-  No Good
-  Poor
-  Ok
-  Good
-  Great



What are your main concerns about using seeding to manage weeds?

| Reason | Eureka        | Fresno             | Salinas               | Susanville                            | Woodland              |
|--------|---------------|--------------------|-----------------------|---------------------------------------|-----------------------|
| #1     | Cost          | Cost               | Cost                  | Cost                                  | Establishment         |
| #2     | Establishment | Establishment      | Establishment         | Establishment                         | Cost                  |
| #3     | Terrain       | Lack of experience | Availability of water | Availability of water + terrain (tie) | Availability of water |