Las Flores Weed Workshop

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Characteristics
Positive vs Negative
What Weeds Tell us
Noxious vs Invasive
Management Methods
- Cultural
- Mechanical
- Biological
- Chemical

ID Resources
Weed Scavenger Hunt
Weeds of Tomorrow

Presented by Patty Jordan
Napa MG Class of 2016

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Weeds

Definition

- A Plant Out of Place Scott Oneto
- A Plant Growing Where Not Wanted UCMG Handbook
- A Plant Whose Virtues Have Not Yet been Discovered Ralph Waldo Emerson

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Weeds

Characteristics

- Establish Fast / Grow Fast
- Abundant Seed Production
- Seed Dormancy Ability
- Multiple Adaptations for Spreading
- Few Pests and Diseases
- Very Resourceful at Getting Water and Nutrients

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Positive Side of Weeds

- Reduce Dust and Soil Erosion
- Provide Cover + Food for Vertebrates like Birds
- Provide Habitat for Beneficial Predators
- Provide Nectar + Pollen for Honeybees
- Can be Eaten by Humans
- Have Therapeutic Herbal + Pharmaceutical Properties

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Negative Side of Weeds

- Competes with Food Crops for Water and Nutrients $$$ Crop Loss
- $$$ Agricultural Control Measures
- Reduces Grazing Ability of Land (Spurge) + Recreational Land Value (Yellow Thistle)
- Provides Cover + Food for Vertebrate Pests like Rodents
- Loss of Endangered Species Habitat (Purple Loose Strife)
- Hosts for Insects Pests + Pathogens during Winter
- Reduces Water Resources (Tamarisk)
- Allergens for People
- Provides Fuel for Fires

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Weeds

Some Facts

- Ca has 5,000 Native plant species and 1,300 non-native species!
- 50% of Weeds were introduced by the Ornamental Plant Industry!
- 70% of all Weeds are from the Poaceae and Asteraceae Family!
- Weeds account for$24 Billion in annual agricultural crop loss and $3 Billion in annual control costs!
- Pigweed produces more than 200,000 seeds per plant!
- Lambsquarters seed can be viable up to 1,700 years!
- Yellow Nutsedge produces 18,000 tubers in one year!

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Weeds

What Weeds Tell Us

Do know Some of the Weed Indicators?

- Annual Blue Grass, Crabgrass, Nutsedge in lawns?
- Spotted Spurge, Knotweed ?
- Clovers in lawns?
- Dandelion, Annual Fescue?
- Bermuda Grass in turf perimeters?

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Weeds

What Weeds Tell Us

Do You Know of the Weed Indicators?

- Annual Blue Grass, Crabgrass, Nutsedge in lawns? Overwatering/Poor Drainage
  Dethatch,Aerate,check irrigation
- Spotted Spurge, Knotweed ? Compacted Area Mulch,monitor
- Clovers in lawns? Nitrogen Deficient Better Fertilization schedule
- Dandelion, Annual Fescue? Bare Spot Opportunities Mulch, use groundcover
- Bermuda Grass in turf perimeters? Mowing too Short Raise Mower height

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Weeds

Noxious

A Non-Native plant species that have been designated by state or national agricultural authorities as injurious to agricultural and/or horticultural crops and/or humans and livestock.
Ratings A,B,C,D and Q. An "A" rating is of the highest importance and can include banning, quarantine and eradication. Typically occurring as low populations which the State feels they can contain and eradicate without it spreading.

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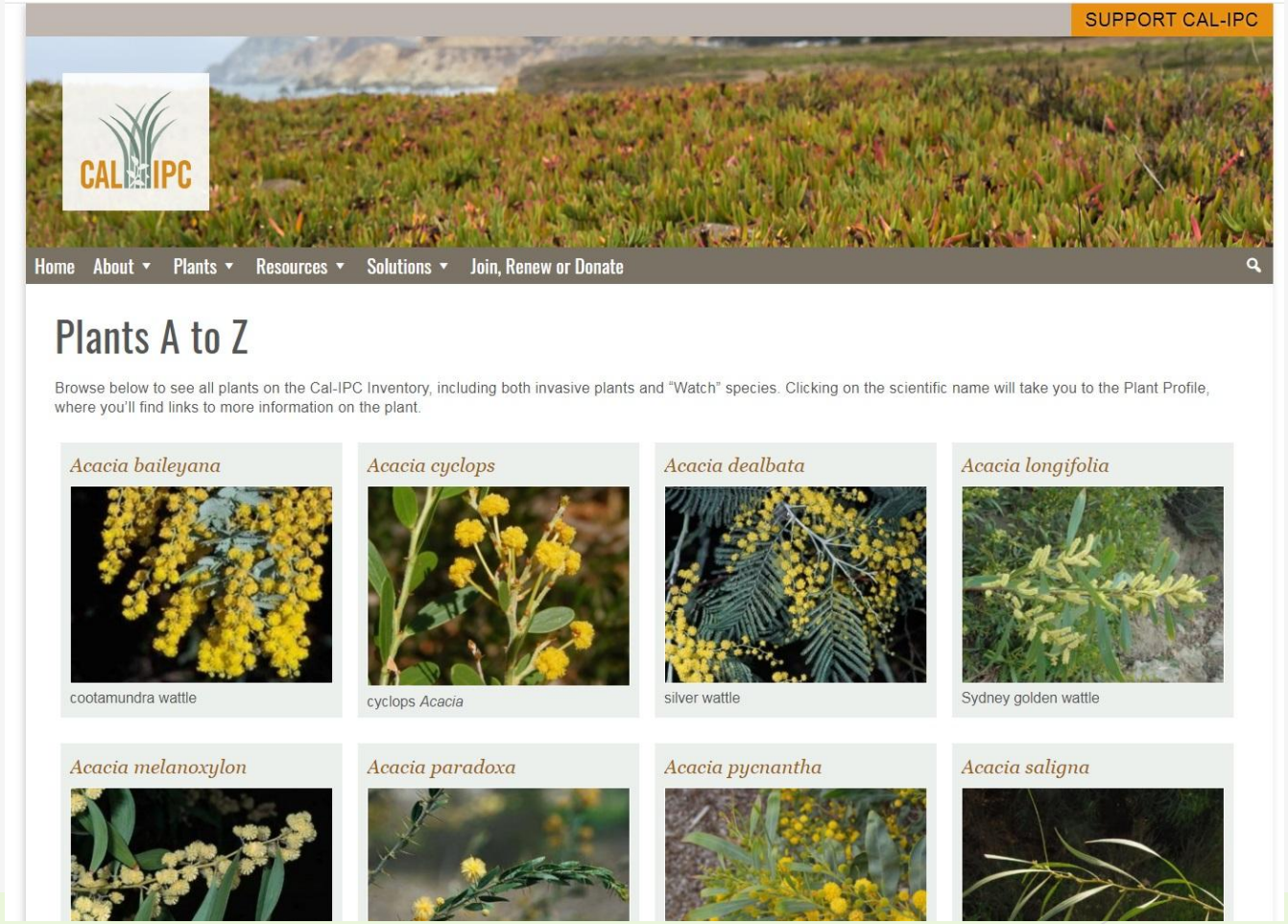
Weeds

Invasive

- Invasive Weed: A Non-Native species whose introduction causes economic or environmental harm or harm to human health. No regulatory framework. Occurs primarily in wild areas and riparian areas and not agricultural areas.

Weeds

- See Cal Invasive Plant Council extensive list.
- http://www.cal-ipc.org/plants/profiles



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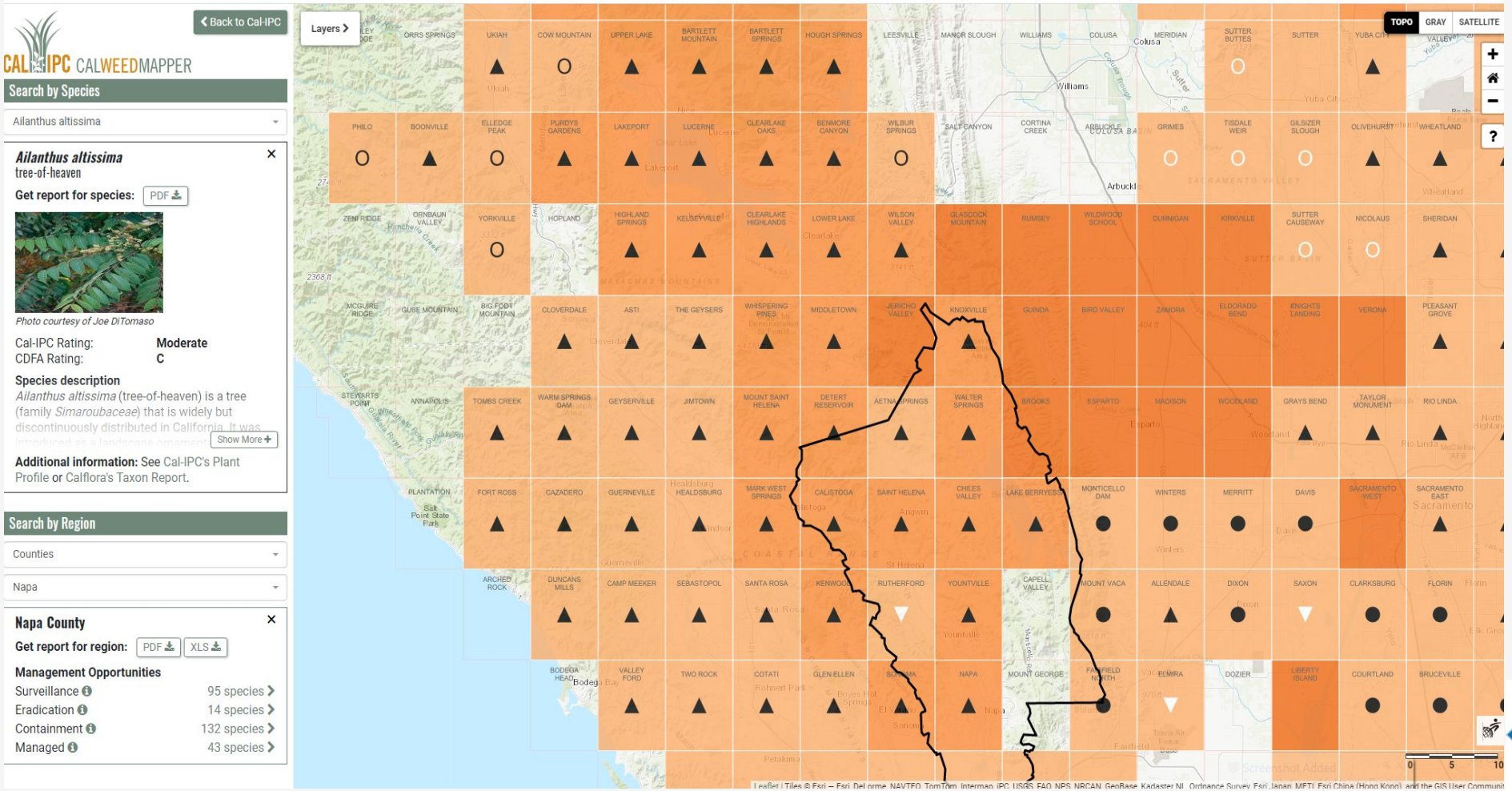
Weeds

and https//calweedmapper.cal-ipc.org/



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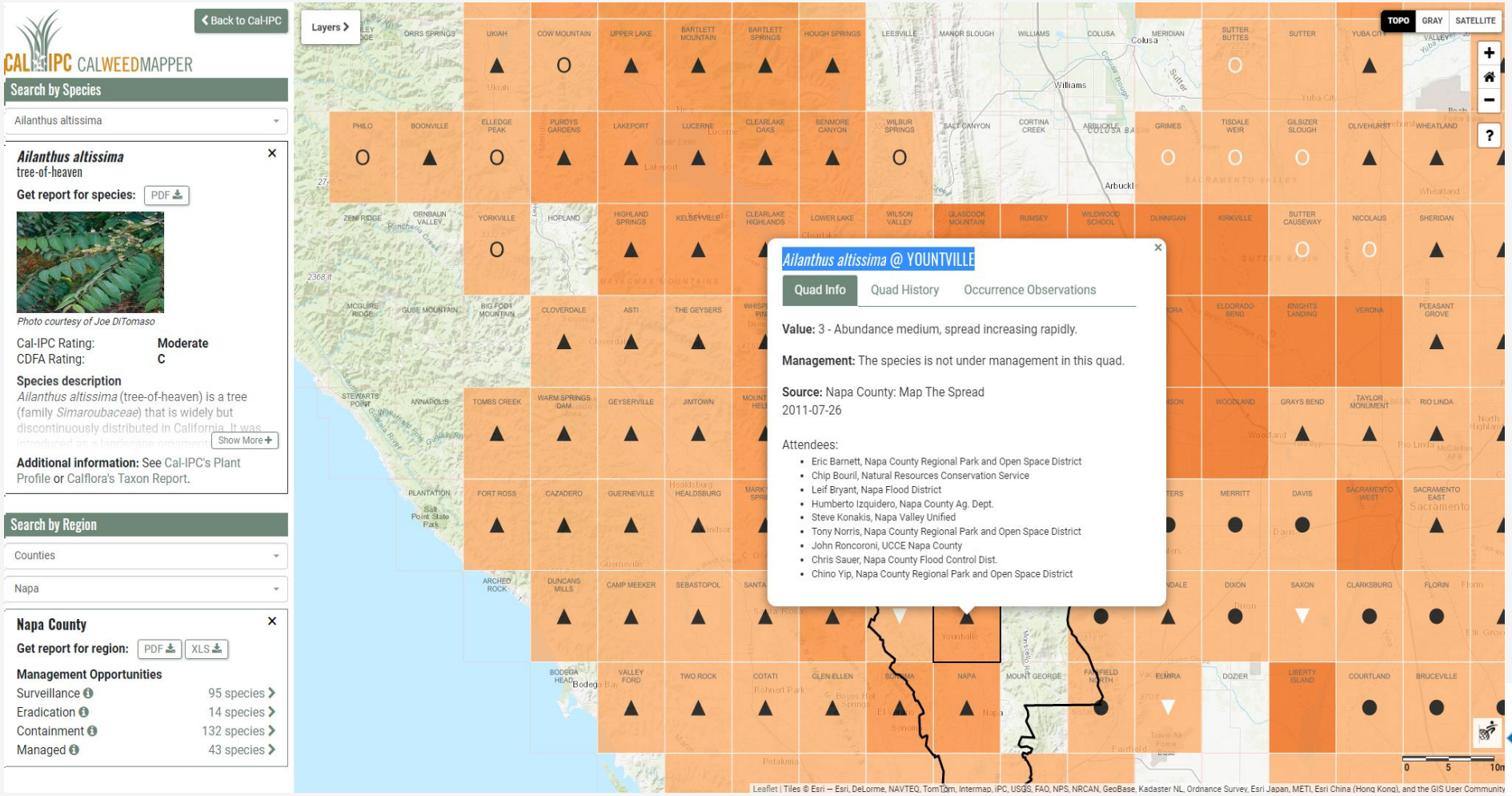
See the extent and intensity of weed populations.

Weeds

Check on an specific quadrangle to see current status



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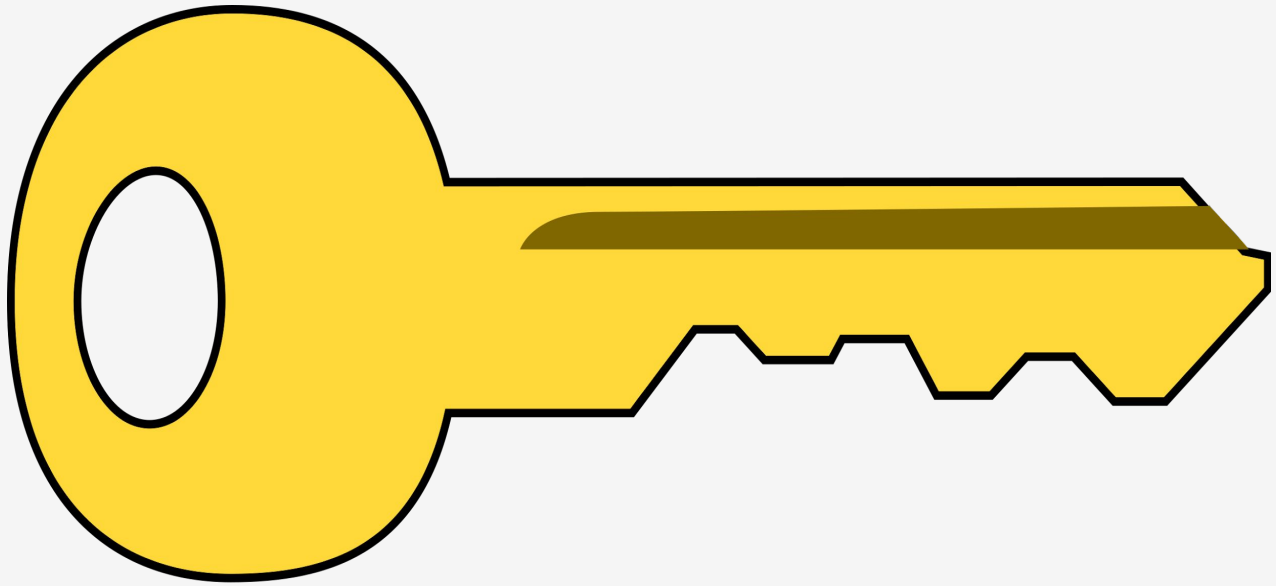
Look up each surveyed quadrangle for specific information.

Weeds

The Key to Weed Control Is Breaking their Life Cycle



Target the weed BEFORE its Flowering Stage

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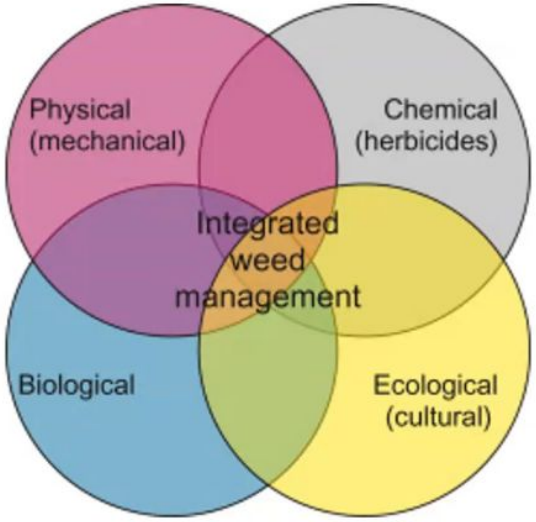
Weeds

Weed Management Strategy

- Identify the weed, life cycle, habitat
- Integrated Weed Management

1. Cultural
2. Mechanical
3. Biological
4. Chemical



- The most effective, long-term way to manage pests is by using a combination of methods that work better together than separately.

Weeds

Integrated Pest Management IPM

Is a sustainable, science-based, decision-making process that combines cultural, physical, biological and chemical tools to identify, manage and reduce risk from pests and pest management tools and strategies in a way that minimizes overall economic, health and environmental risks.

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Weeds

Cultural

Modify the environment to improve the competitive advantage of desirable plants and decrease the weed's competitive edge

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Weeds

Cultural

Modify the environment to improve the competitive advantage of desirable plants and decrease the weed's competitive edge

- Proper soil preparation
- Correct plant selection
- Irrigation management
- Proper mowing height
- Reduction of soil compaction
- Crop rotation

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Weeds

Mechanical Uses tools and barriers to control weeds

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Weeds

Mechanical Uses tools and barriers to control weeds

- Hand pulling, hoe, rake, shovel (best when small)
- Cultivation: water-wait-cultivate (shallow)
  - Careful with perennials that propagate via fragments.
- Rototil or disc (may bring seeds to surface)
  - Excessive soil disruption has many negative impacts
- Flaming (best on small annuals)
  - Requires special safety precautions
- Mowing or chopping
  - Careful with perennials that propagate via fragments.
- Mulching (fabrics and/or mulches block light)
- Solarization

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Weeds

Biological — **Employs animals or natural enemies to reduce weed populations.**

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Weeds

Biological

Employs animals or natural enemies to reduce weed populations.

- Goats- brush
- Sheep and Cow - grasses
- Geese and Chickens – weed seeds
- Insects and pathogens- long term strategy

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Weeds

Chemical Use of chemicals to kill weeds

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Weeds

Chemical

Use of chemicals to kill weeds

- Contact vs Systemics
- Selective vs Non-Selective
- Pre-Emergent vs Post Emergent

The last resort. You must chose carefully. Always Read and Follow the Label. Before you select, you need to know the weed, life cycle, soil type, environ conditions (temp, wind, rain), is your weed on the susceptible list?, do you have the application equipment, correct calibration and protective clothing?

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Weeds

Weed ID Resources

- Weeds of the West, book
- Weed Pest Identification and Monitoring Cards, UCANR 3541

- Online
  - UC IPM Weed Gallery
  - Weed Research and Information Center , WRIC

Let’s Explore these two online resources

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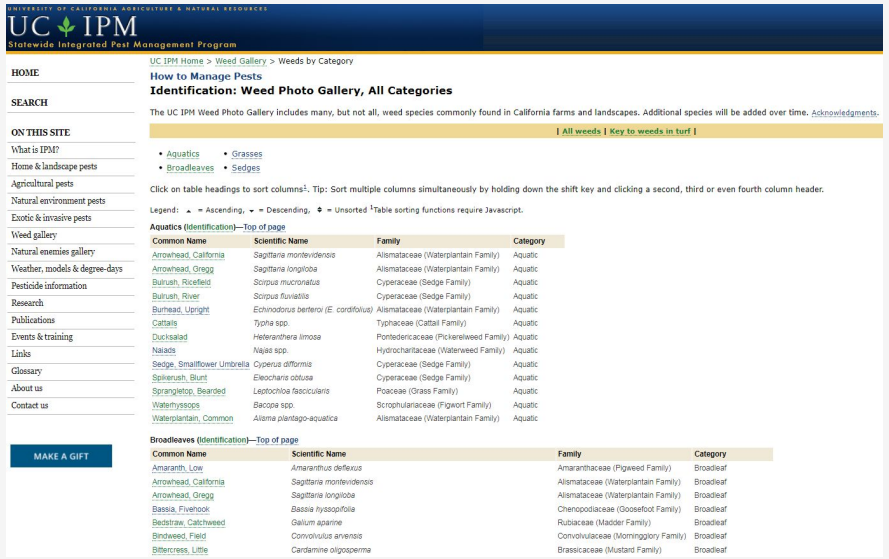
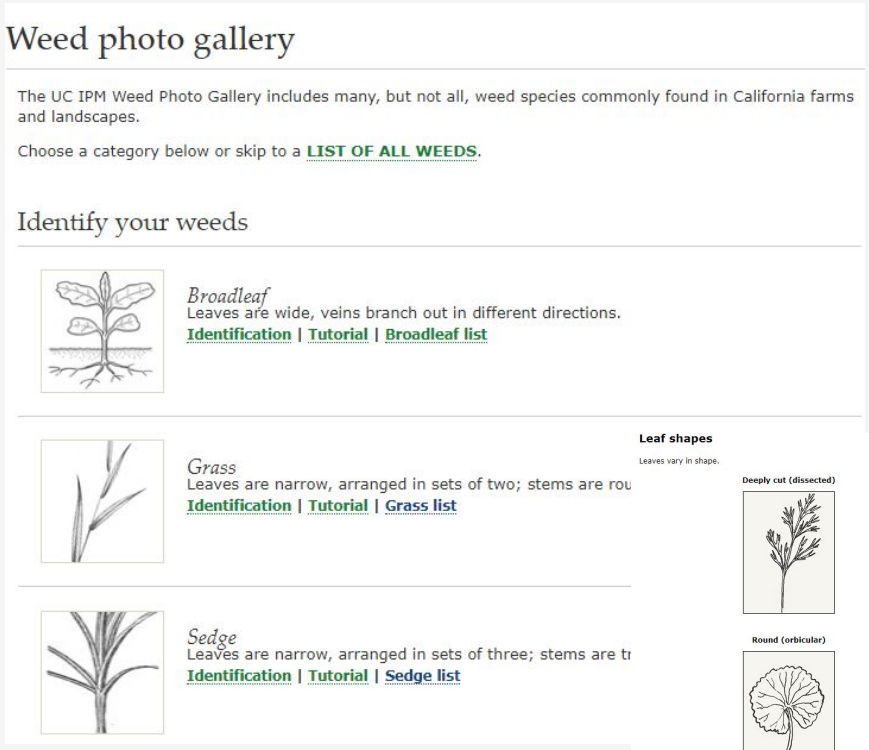
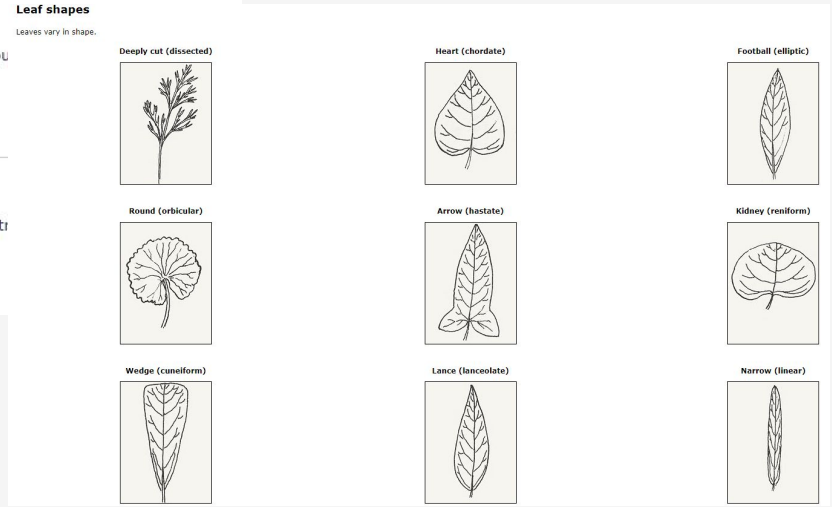
Weeds

Weed ID Resources

UC IPM Weed Gallery





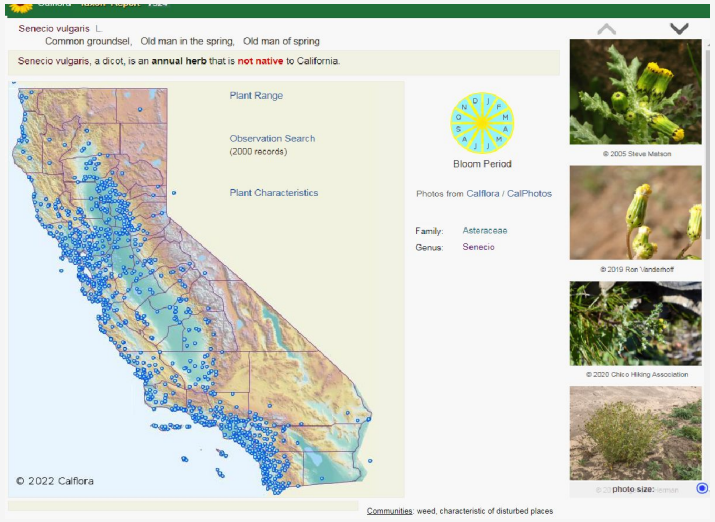


The Weed Gallery helps you identify your weed based on shapes

Weeds

Weed ID Resources

UC IPM Weed Gallery

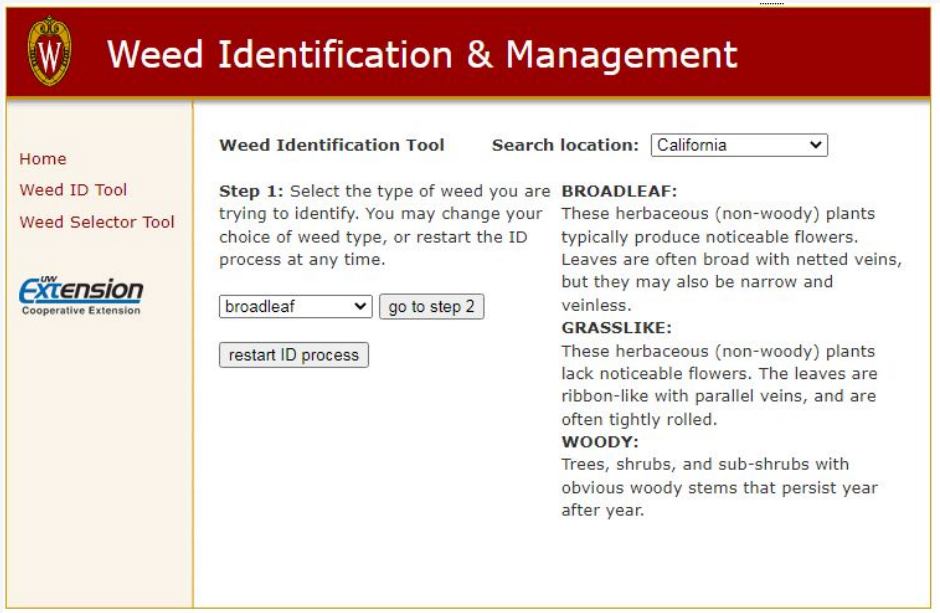


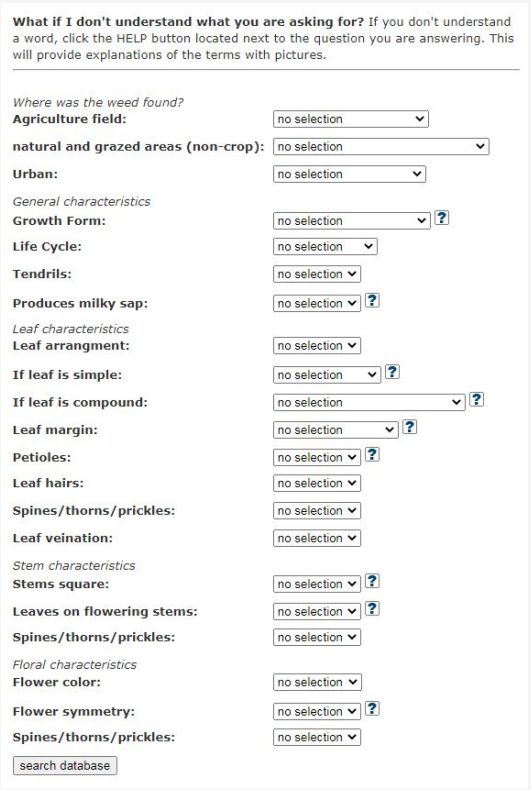
The Weed Gallery describes weed characteristics, distribution and provides management information.

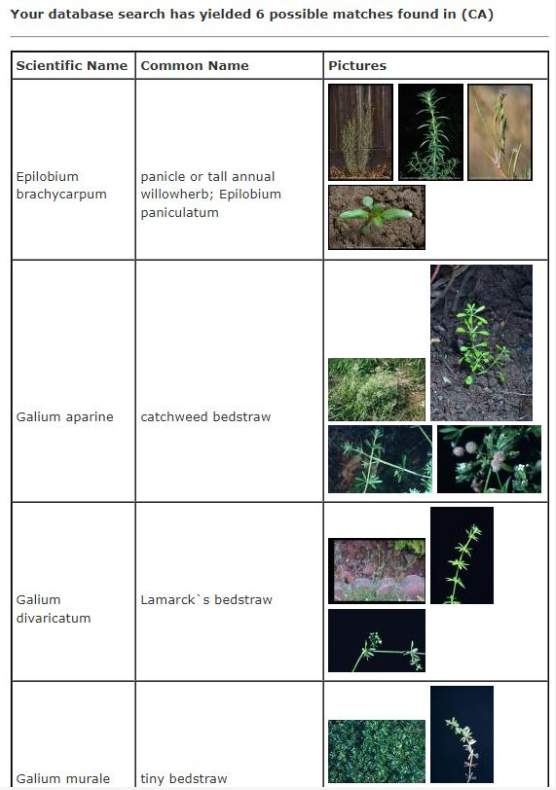
Weeds

Weed ID Resources

Weed Research and Information Center , WRIC







WRIC asks you to answer questions and finds plants in its database that match.

Weeds

The Weed Scavenger Hunt

The public is asked to look around the Las Flores building and parking lot for colored flags which mark the presence of a weed. The public will try to match the weed with the correct name. After 15-20 minutes the group will be asked to reconvene and go over the answers. General control methods will be discussed.

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Weeds

Let's explore the PlantRight Website, https://plantright.org

PlantRight works with California's nursery industry to keep invasive plants off our landscapes and to promote the sale of exclusively non-invasive alternatives.

- Priority List of Invasive plants for 2022
- The Plants to Watch List
- Success Stories of Weeds No Longer Sold
- Sign up for The 2022 Spring Survey to participate

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Weeds

Weeds of Tomorrow May already be at the nurseries

- Educate yourself on those plants who pose the highest risk of escaping into our agricultural or wild lands.
- Educate others.
- Advocate for the banning of these plants.

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Additional information links:

UC integrated pest management definition/description:

https://www2.ipm.ucanr.edu/What-is-IPM/

UC IPM

Weed Research and Information Center

https://wric.ucdavis.edu/

Weed Photo Gallery

http://ipm.ucanr.edu/PMG/weeds_intro.html