UC San Diego
FACILITIES MANAGEMENT

# April Brown Bag Lunch Presentations

Presentation 1: Urban Forest/Mulch Update

Presentation 2: Integrated Pest Management

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# Topic
# UCSD Urban Forest Update

## Date
## April 24, 2018

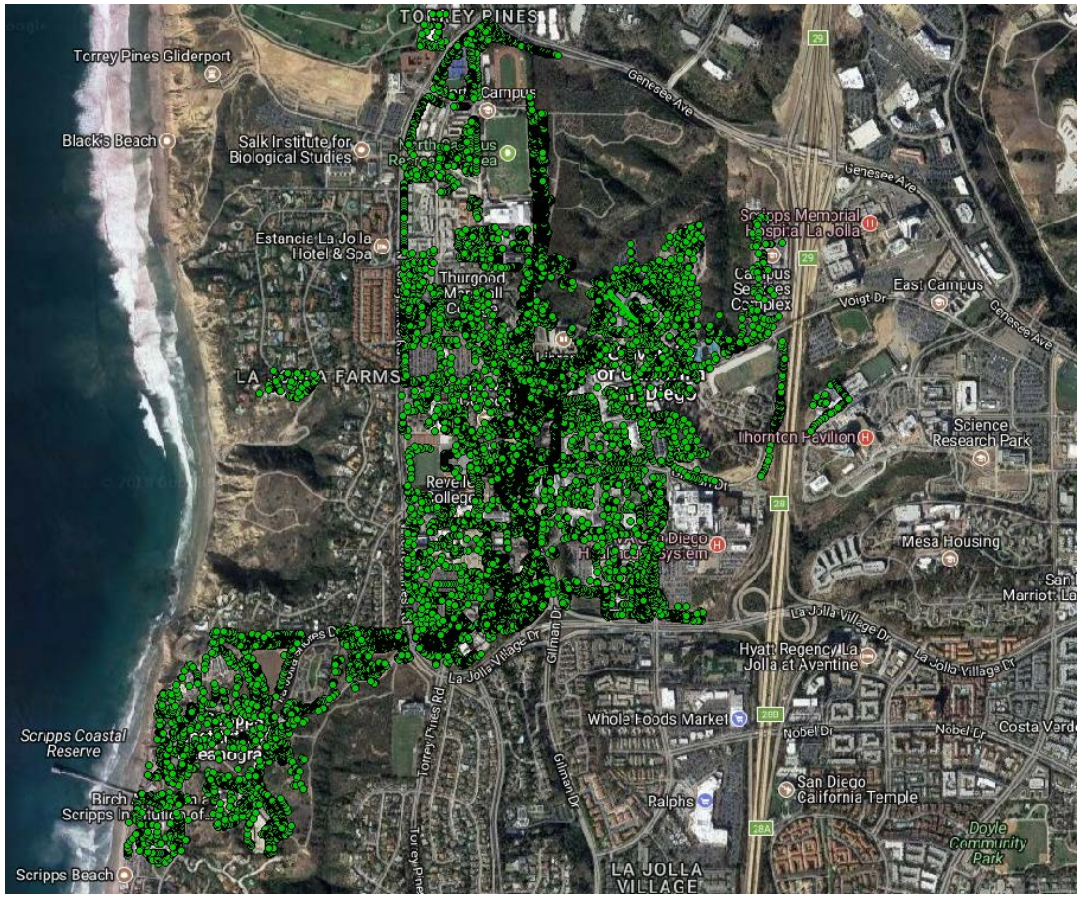
# Urban Forestry

## Management

We have a new and very useful tool at our disposal- ArborPro

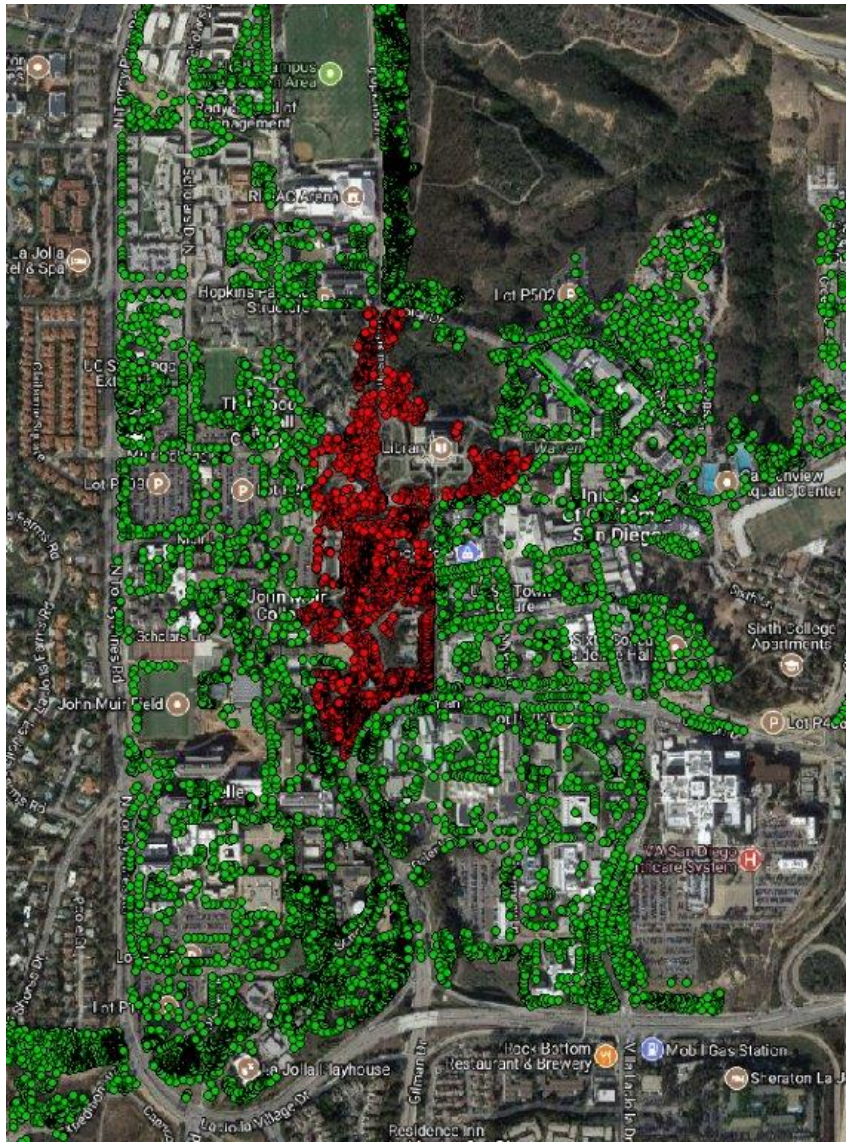
This tool:

- Houses a complete inventory of all our trees on campus
- Can generate reports of various types
  - Genus/species
  - Size
  - Condition
- Tracks work that is planned and work that has already occurred
- Can create “work lists” that can used for in-house and contracted staff



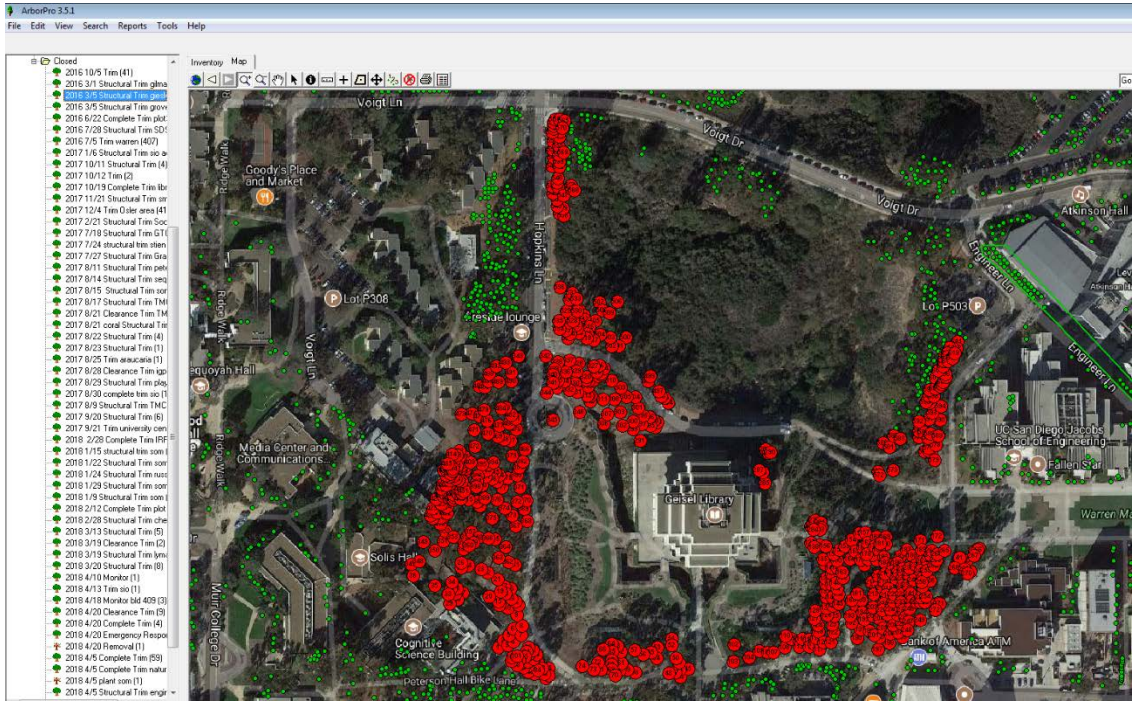
# Planning work…

“When were these last done?” asks the new guy…



# Tracking work…

And the answer is…in March of 2016!



# Here are the red dots- in words and numbers

ArborPro Report

Print | Close | Save as CSV

**2016 3/5 Structural Trim giesle area Trim/Structural Trim Crew: West Coast Arborists, Inc.**

| Point | ID | Area | Location | Site | DBH | Height | Condition | Common_Name | Botanical_Name | Completed |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1548 | Building | Cognitive Science Building | 455 | 1 | 00-15 | Good | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 2 | 1549 | Building | Cognitive Science Building | 456 | 1 | 00-15 | Good | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 3 | 1550 | Common | Hopskins Lane Grove | 457 | 1 | 00-15 | Good | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 4 | 1551 | Common | Hopskins Lane Grove | 458 | 1 | 00-15 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 5 | 1552 | Building | Cognitive Science Building | 459 | 1 | 00-15 | Good | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 6 | 1553 | Building | Cognitive Science Building | 460 | 2 | 00-15 | Good | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 7 | 1554 | Common | Hopskins Lane Grove | 461 | 13 | 30-45 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 8 | 1555 | Common | Hopskins Lane Grove | 462 | 9 | 30-45 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 9 | 1556 | Common | Hopskins Lane Grove | 463 | 12 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 10 | 1557 | Building | Cognitive Science Building | 464 | 25 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 11 | 1558 | Common | Hopskins Lane Grove | 465 | 12 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 12 | 1559 | Common | Hopskins Lane Grove | 466 | 13 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 13 | 1560 | Common | Hopskins Lane Grove | 467 | 6 | 15-30 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 14 | 1561 | Building | Cognitive Science Building | 468 | 17 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 15 | 1562 | Building | Cognitive Science Building | 469 | 18 | 45-60 | Fair | Sugar Gum | Eucalyptus cladocalyx | |
| Notes: | | | | | | | | | | |
| 16 | 1563 | Common | Hopskins Lane Grove | 470 | 14 | 15-30 | Poor | Sugar Gum | Eucalyptus cladocalyx | |

# With a properly managed forest we can increase the benefits provided to us by trees

Those benefits include:

- Sequestering $CO_2$ from and adding oxygen to the atmosphere – reducing emissions of about 1,000 metric tons of $CO_2$ per year.
- Reducing energy consumption- with and without shade. The trees of UCSD help reduce energy use by 1,288 MWh
- Rainwater interception = Reduced Stormwater runoff = less erosion = cleaner water. The UCSD forest traps and filters nearly 14 million gallons of stormwater each year.
- Social benefits- such as reduction of stress, violence and vandalism. The trees serve as a reminder of the campus' cultural legacy.
- They provide shelter and food for the flora and fauna that make their home there and create a more attractive environment for the people wo live, work and study at UCSD.

# The power of multiples!

With over 20,000 trees inventoried we are well on our way to getting the most from our forest

# Questions / Comments

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Topic

# Integrated Pest Management (IPM)

Date

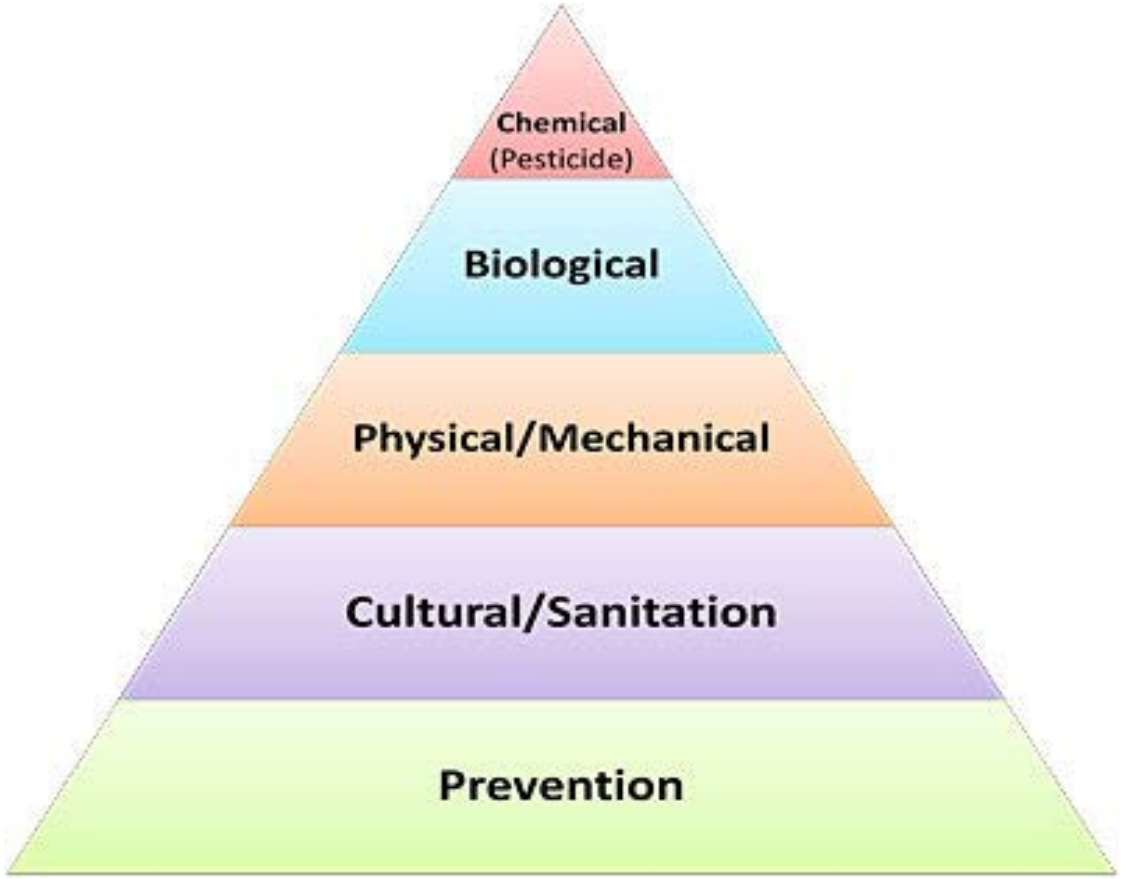
April 24, 2018

# Reduced Chemical Use as a Part of the IPM Program at UC San Diego

The ‘If’,
‘Where’,
‘When’ and
‘Which’ of Pest Control

# What is an IPM?

**Integrated pest management (IPM)** is not a single pest management method but a series of pest management evaluations, decisions, and actions.




The basic elements of an IPM program are:

# PREVENTION

Practice good sanitation and regular maintenance in order to create an environment that is not conducive to pest establishment, growth, or reproduction.

For pest plants (aka Weeds), MULCH is an important part of our prevention measures

# MULCH

# Different Kinds Of Mulch

## Organic

- Wood chips
- Pine needles
- Composted green waste

## Inorganic

- Rocks
- Plastic
- Recycled rubber

Mulch can be nearly anything laid on the surface of the soil in a landscape for a specific beneficial purpose…

Your ‘57 Chevy rusting in the front yard is NOT mulch!

# Why Mulch?

Mulch:

- Retains soil moisture
- Slows erosion
- Weed suppression
- Lowered herbicide application
- Breaks down into soil nutrients

# Mulch Maintenance

- Like anything, mulch needs to be maintained.
- Organic mulch breaks down, decomposes, becomes soil
- Inorganic mulch degrades overtime as well-
- Even rocks!

# UCSD Produced Mulch

Everything that we can chip, we do. UCSD Tree Crew produced approximately 1,200 cubic yards of wood chips

Outside tree trimming contractors account for approximately 1,500 cubic yards

The mulch is seasoned and repurposed into our landscapes

# PRE-ESTABLISHED ACTION LEVELS

Determine a point at which pest populations or environmental conditions indicate that action must be taken. Action levels may vary by site, pest, and season. Finding a single pest does not always mean immediate action is needed.

# MONITORING AND IDENTIFICATION

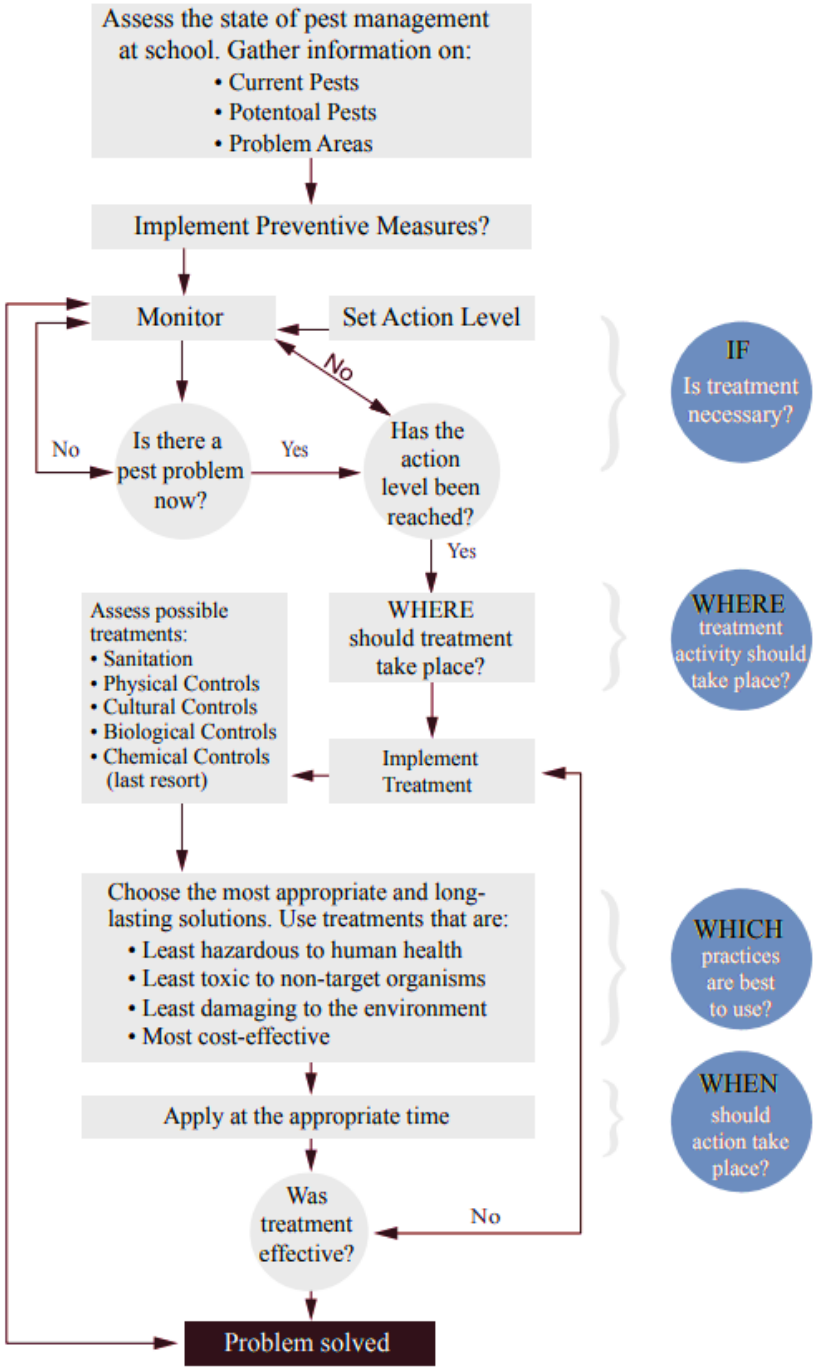
Keep track of pest populations to determine if pests are reaching your pre-established action levels. This will help determine what type of treatment, if any, is necessary and reveals whether pest treatment has been effective.

# USING LEAST-HAZARDOUS METHODS

Once prevention, action levels, and monitoring indicate that pest management is needed, evaluate the proper management methods for both effectiveness and risk. Effective, non-chemical pest management practices, including mechanical options such as hand-pulling weeds or vacuuming up cockroaches, are chosen first, followed by least hazardous chemical options, such as low toxicity products or highly targeted chemicals like pheromones that disrupt mating. It's a good idea to check for alternatives to pesticides first.

Lacewing adult and larvae

# The IPM Decision Making Process



# CRITERIA FOR SELECTING LEAST HAZARDOUS PEST CONTROL PRACTICES

Once the IPM decision-making process is in place and monitoring indicates a pest treatment is needed, the choice of specific practices can be made. Choose practices that are:

- Least hazardous to human health.
- Least disruptive of natural controls in landscape situations.
- Least toxic to non-target organisms.
- Most likely to be permanent and prevent recurrence of the pest problem.
- Easiest to carry out safely and effectively.
- Most cost-effective in the short and long term.
- Appropriate to the weather, soils, water, and the energy resources of the site and the maintenance system

# EXEMPT PESTICIDE PRODUCTS

For treating pests in the landscape when effective, when pest populations are moderate and the location makes the most sense.

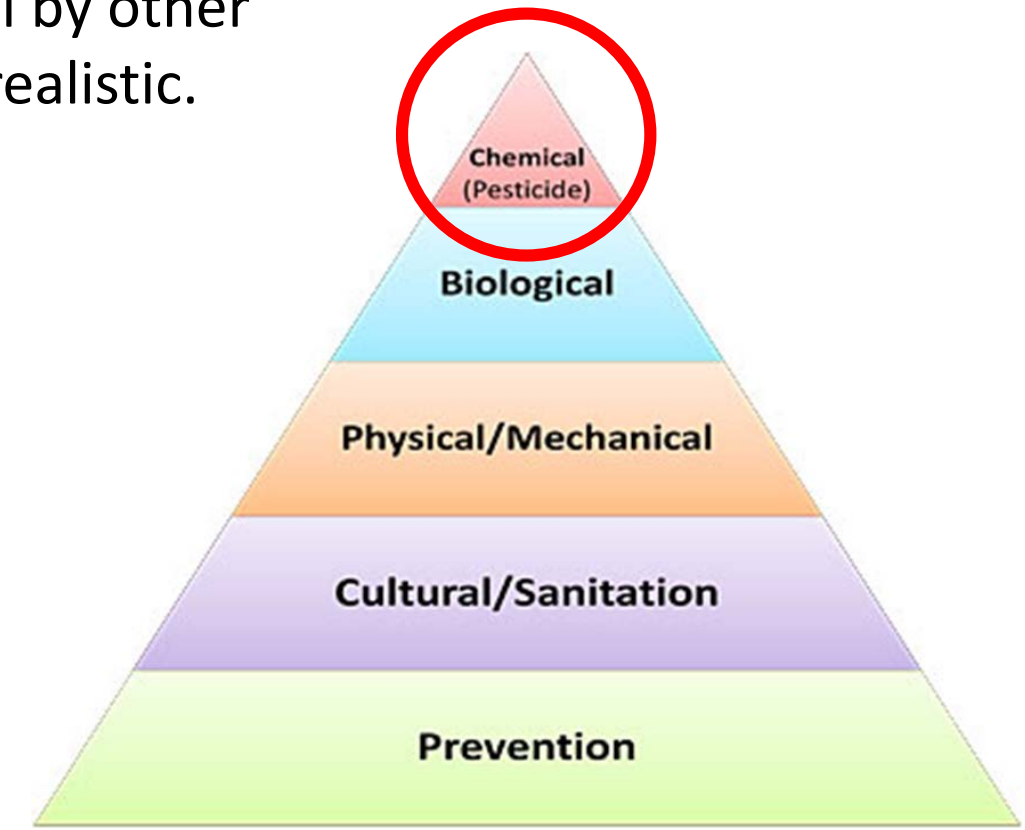

**APPENDIX 1: Exempt Active Ingredients**

Active Ingredients Allowed in Exempted Pesticide Products under FIFRA 25(b) and the California Code of Regulations (CCR) § 6147

| CAS # | Chemical Name | CAS # | Chemical Name |
|---|---|---|---|
| 8001-79-4 | Castor oil (U.S.P. or equivalent) | 6915-15-7 | Malic acid [1] |
| N/A | Cedar oil [1] | N/A | Mint |
| N/A | Cinnamon | N/A | Mint oil [1] |
| N/A | Cinnamon oil [1] | N/A | Peppermint [2] |
| 77-92-9 | Citric acid 1 | 8006-90-4 | Peppermint oil [1, 2] |
| N/A | Citronella (non-topical uses only) | 122-70-3 | 2-Phenethyl propionate [1] |
| 8000-29-1 | Citronella oil (non-topical uses only) | 122-70-3 | 2-phenylethyl propionate [1] |
| N/A | Cloves [2] | 590-00-1 | Potassium sorbate [1] |
| 8000-34-8 | Clove oil [1, 2] | N/A | Putrescent whole egg solids |
| N/A | Corn gluten meal | N/A | Rosemary [2] |
| 8001-30-7 | Corn oil | 8000-25-7 | Rosemary oil [1, 2] |
| N/A | Cottonseed oil | N/A | Sesame (includes ground sesame plant) |
| N/A | Dried blood | 8008-74-0 | Sesame oil |
| 97-53-0 | Eugenol [1, 2] | 7647-14-5 | Sodium chloride (common salt) |
| N/A | Garlic | 151-21-3 | Sodium lauryl sulfate [1, 2] |
| 8008-99-9 | Garlic oil [1] | 8001-22-7 | Soybean oil |
| 106-24-1 | Geraniol [2] | N/A | Thyme [2] |
| 8000-46-2 | Geranium oil [2] | 8007-46-3 | Thyme oil [1, 2] |
| N/A | Lauryl sulfate [1] | N/A | White pepper [1] |
| 8007-02-1 | Lemongrass oil [1] | 7440-66-6 | Zinc metal strips (consisting solely of zinc metal and impurities) |
| 8001-26-1 | Linseed oil | | |

Asian Citrus Psyllid

We reserve the use of EPA registered Pesticides as a LAST RESORT and to address pest issues that represent a risk to public health or property, or when infestations are at a level where timely control by other methods can difficult or unrealistic.



# Pest Notes Library

Pest Notes are peer-reviewed scientific publications about specific pests or pest management topics, directed at California's home and landscape audiences. Pest Notes are available to view online and in a downloadable PDF version. Most Pest Notes are 2 to 5 pages long in print.

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