Agricultural Entomology in Riverside County 2009 - Today

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University of California
Agriculture and Natural Resources
Making a Difference for California

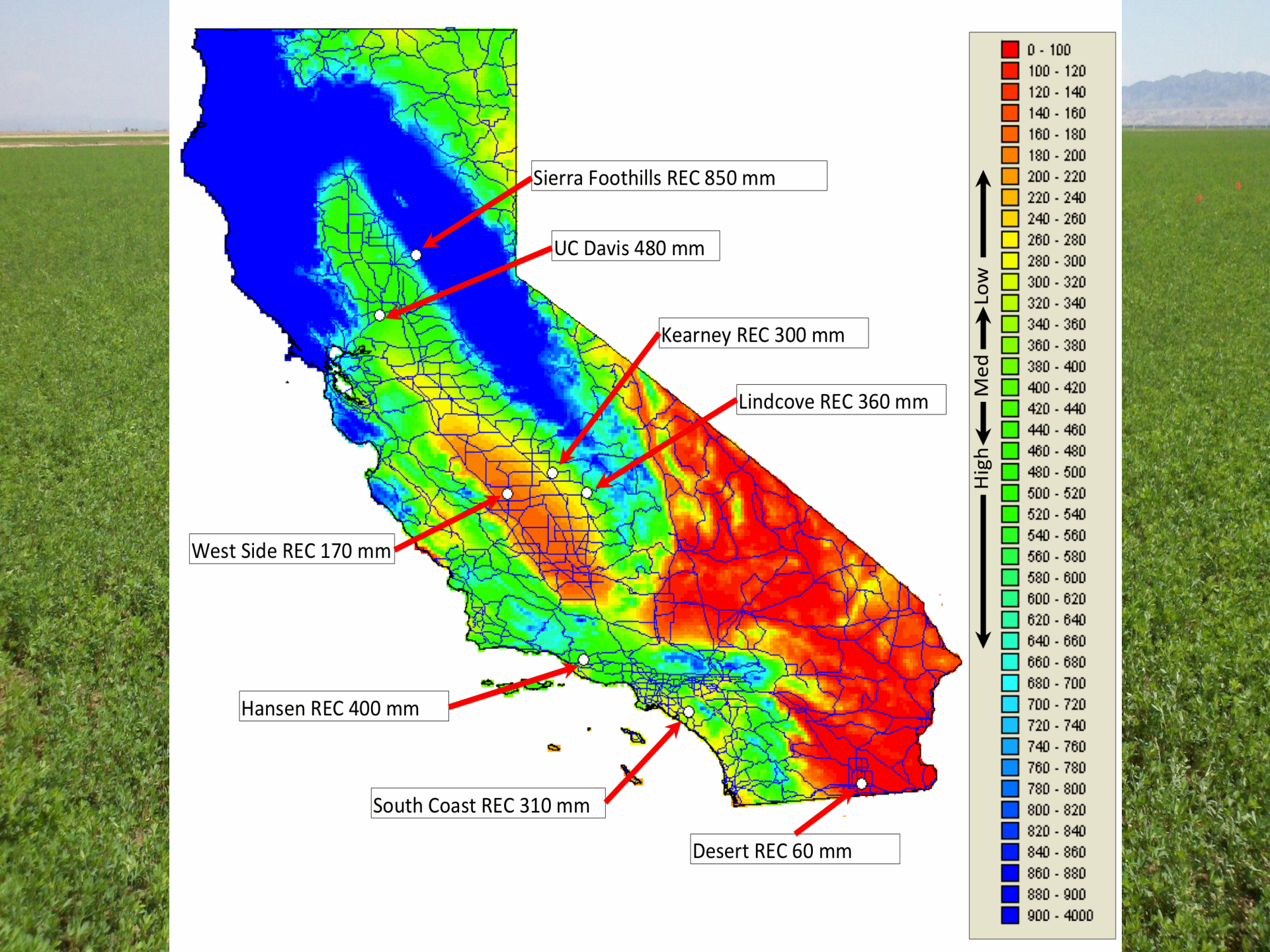

Canada
United States
Mexico
Vancouver
Abbotsford
Kelowna
Victoria
Calgary
Regina
Winnipeg
Seattle
Bellevue
Olympia
Tacoma
Washington
Spokane
Portland
Salem
Eugene
Oregon
Helena
Montana
Bismarck
North Dakota
Minnesota
Thunder Bay
Sudbury
Quebec
Trois-Rivieres
Montreal
Chicoutimi
Fredericton
Sherbrooke
Maine
Ottawa
Augusta
Vermont
Montpelier
Concord
New Hampshire
Lowell
Boston
Massachusetts
Albany
Syracuse
Springfield
Providence
Rhode Island
Connecticut
Hartford
New Haven
Stamford
Newark
New York
New Jersey
Trenton
Philadelphia
Dover
Delaware
Annapolis
Maryland
Washington D.C.
Richmond
Virginia Beach
Norfolk
Virginia
Charleston
Frankfort
Lexington
Kentucky
Winston-Salem
Greensboro
Raleigh
North Carolina
Charlotte
Columbia
South Carolina
Atlanta
Augusta
Macon
Georgia
Savannah
Jacksonville
Tallahassee
Florida
Orlando
Tampa
Clearwater
Saint Petersburg
Coral Springs
Fort Lauderdale
Miami
Bahama Islands
Nassau
Gulf of Mexico
Atlantic Ocean
Pacific Ocean
Boise
Idaho
Wyoming
Pierre
South Dakota
Saint Paul
Minneapolis
Wisconsin
Madison
Milwaukee
Michigan
Lansing
Flint
Detroit
Windsor
Toledo
Cleveland
Erie
Buffalo
Rochester
Toronto
Oshawa
Barrie
Guelph
Hamilton
Kingston
Lake Superior
Lake Michigan
Lake Huron
Lake Erie
Lake Ontario
Sioux Falls
Nebraska
Cheyenne
Salt Lake City
Utah
Nevada
Reno
Carson City
Sacramento
Santa Rosa
Vallejo
Oakland
San Francisco
Modesto
San Jose
Salinas
Fresno
Ford Collins
Denver
Lakewood
Aurora
Colorado Springs
Pueblo
Colorado
Las Vegas
Henderson
Bakersfield
California
Santa Clarita
Pasadena
Oxnard
Los Angeles
San Bernardino
Long Beach
Anaheim
Oceanside
Escondido
San Diego
Tijuana
Mexicali
Ensenada
Arizona
Phoenix
Scottsdale
Tempe
New Mexico
Santa Fe
Albuquerque
Amarillo
Lubbock
Tucson
Nogales
El Paso
Ciudad Juarez
Hermosillo
Chihuahua
Omaha
Iowa
Des Moines
Cedar Rapids
Rockford
Chicago
Gary
Lincoln
Peoria
Springfield
Illinois
Indianapolis
Indiana
Dayton
Cincinnati
Ohio
Columbus
Fort Wayne
Akron
Pittsburgh
Harrisburg
Baltimore
Topeka
Kansas City
Kansas
Missouri
Saint Louis
Louisville
Evansville
Jefferson City
Wichita
Springfield
Tulsa
Oklahoma City
Little Rock
Arkansas
Memphis
Tennessee
Nashville
Knoxville
Chattanooga
Huntsville
Birmingham
Alabama
Montgomery
Jackson
Mississippi
Mobile
Baton Rouge
New Orleans
Louisiana
Lafayette
Beaumont
Houston
Pasadena
Galveston
Austin
San Antonio
Texas
Waco
Abilene
Fort Worth
Plano
Dallas
Shreveport
Corpus Christi
Laredo
Nuevo Laredo
Piedras Negras
Melchor Muzquiz
Sabinas
Monclova
Torreon
Saltillo
McAllen
Monterey
Guadalupe
Montemorelos
Brownsville
Russia
Alaska
Anchorage
Fairbanks
Juneau
Canada
Beaufort Sea
Chukchi Sea
Bering Sea
Gulf of Alaska
Pacific Ocean
Honolulu
Hawaii
Pacific Ocean
0 200 Miles
0 200 KM
0 100 Miles
0 100 KM
0 125 Miles 250 Miles 500 Miles
0 125 KM 250 KM 500 KM

California's agricultural abundance includes more than 400 commodities. The state produces nearly half of **US-grown fruits, nuts and vegetables**. Across the nation, US consumers regularly purchase several crops produced solely in California.

State	Rank	Total Value Billion Dollars
California	**1**	**44.7**
Iowa	2	31.9
Nebraska	3	24.4
Texas	4	22.7
Minnesota	5	20.0

California's **top-ten valued commodities** – 2013:

- Milk — $6.9 billion
- Grapes — $4.449 billion
- Almonds — $4.347 billion
- Nursery plants — $3.543 billion
- Cattle, Calves — $3.299 billion
- Strawberries — $1.939 billion
- Lettuce — $1.448 billion
- Walnuts — $1.349 billion
- Hay — $1.237 billion
- Tomatoes — $1.170 billion


Sierra Foothills REC 850 mm
UC Davis 480 mm
Kearney REC 300 mm
Lindcove REC 360 mm
West Side REC 170 mm
Hansen REC 400 mm
South Coast REC 310 mm
Desert REC 60 mm
0 - 100
100 - 120
120 - 140
140 - 160
160 - 180
180 - 200
200 - 220
220 - 240
240 - 260
260 - 280
280 - 300
300 - 320
320 - 340
340 - 360
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780 - 800
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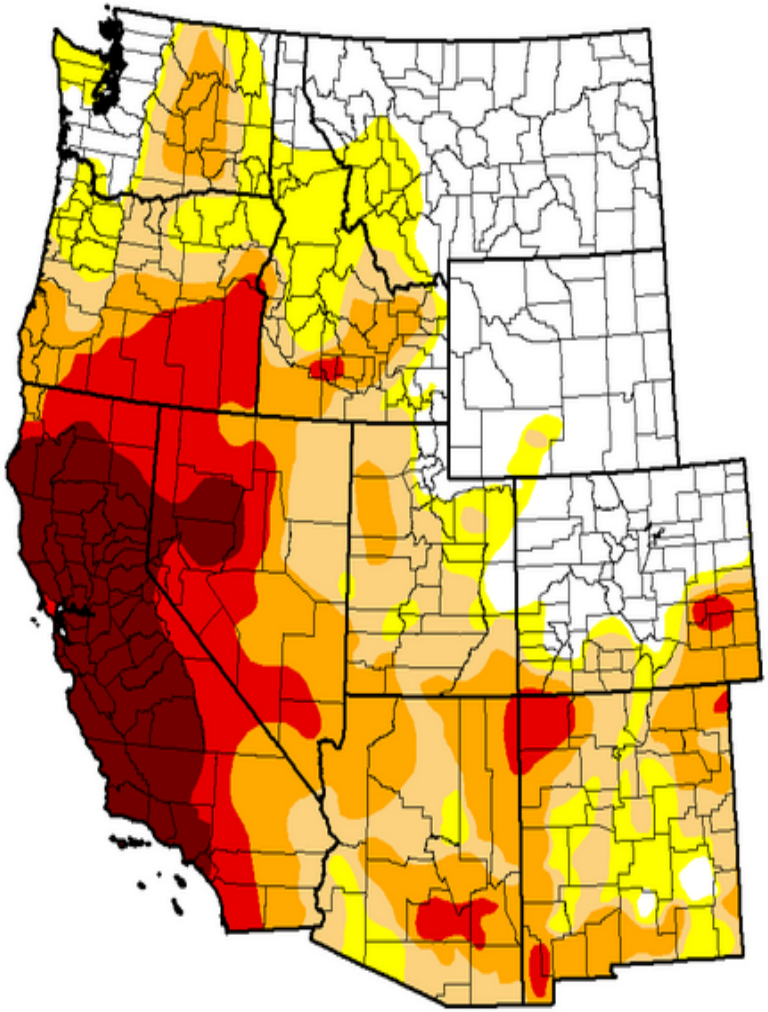
820 - 840
840 - 860
860 - 880
880 - 900
900 - 4000
Low
Med
High

U.S. Drought Monitor

West



September 2, 2014

(Released Thursday September 4, 2014)

Valid 8 a.m. EDT

Statistics type: (•) Traditional (D0-D4, D1-D4, etc.) ( ) Categorical (D0, D1, etc.)

Drought Condition (Percent Area):

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	2014-09-02	28.38	71.62	57.74	40.04	20.16	8.90
Last Week	2014-08-26	27.50	72.50	58.91	41.45	20.62	8.90
3 Months Ago	2014-06-03	31.84	68.16	60.32	47.21	20.20	4.31
Start of Calendar Year	2013-12-31	22.20	77.80	51.44	31.11	7.75	0.63
Start of Water Year	2013-10-01	25.25	74.75	58.96	34.18	5.57	0.63
One Year Ago	2013-09-03	14.19	85.81	76.15	53.28	16.40	1.83

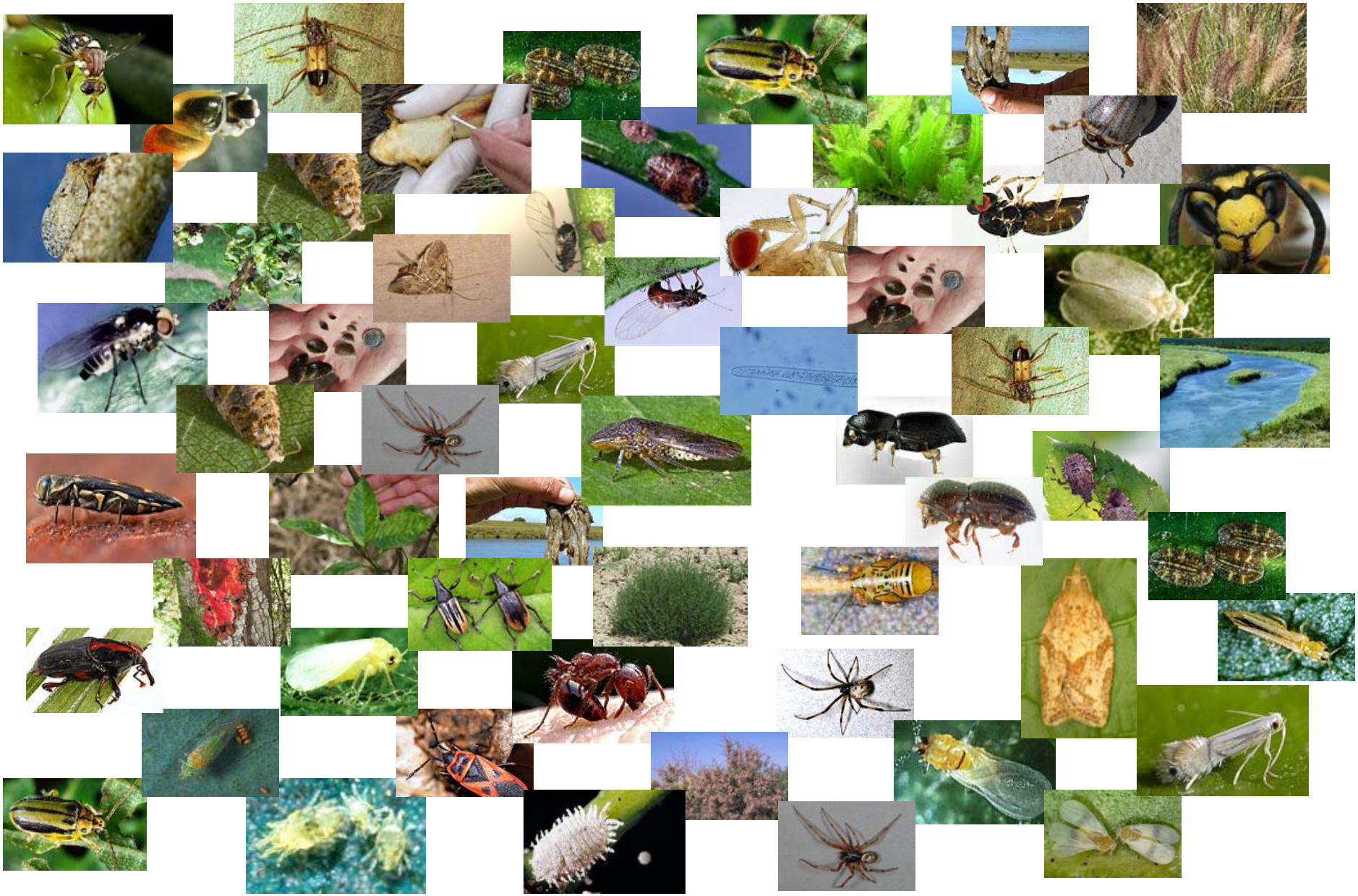
Population Affected by Drought: **51,361,889**

View More Statistics

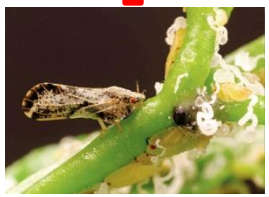
Intensity:

- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.



Invasive Species Complex, an ongoing threat



Invasive species, a problem that starts out local and becomes a regional problem.

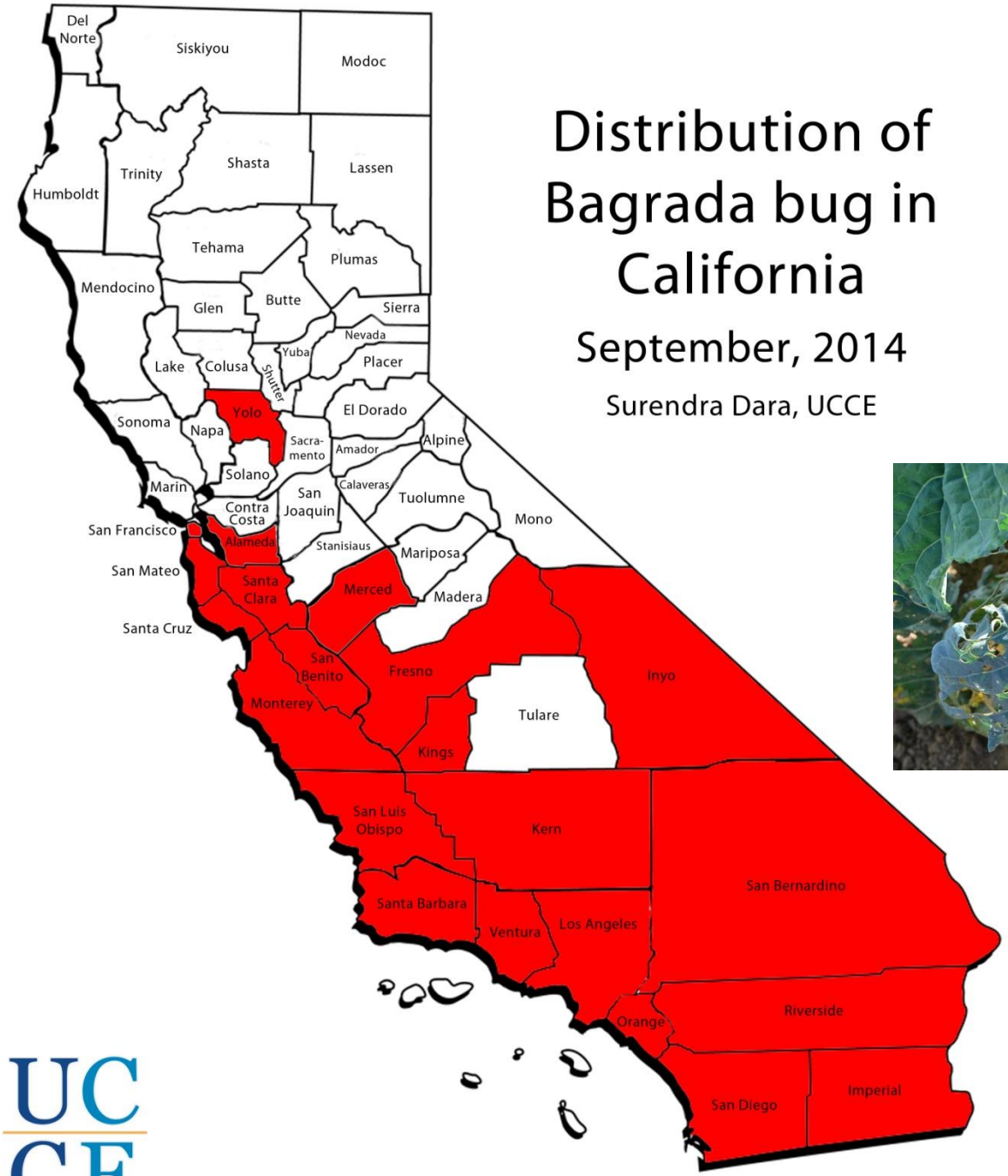
Bagrada bug

- Area of infestation spreading

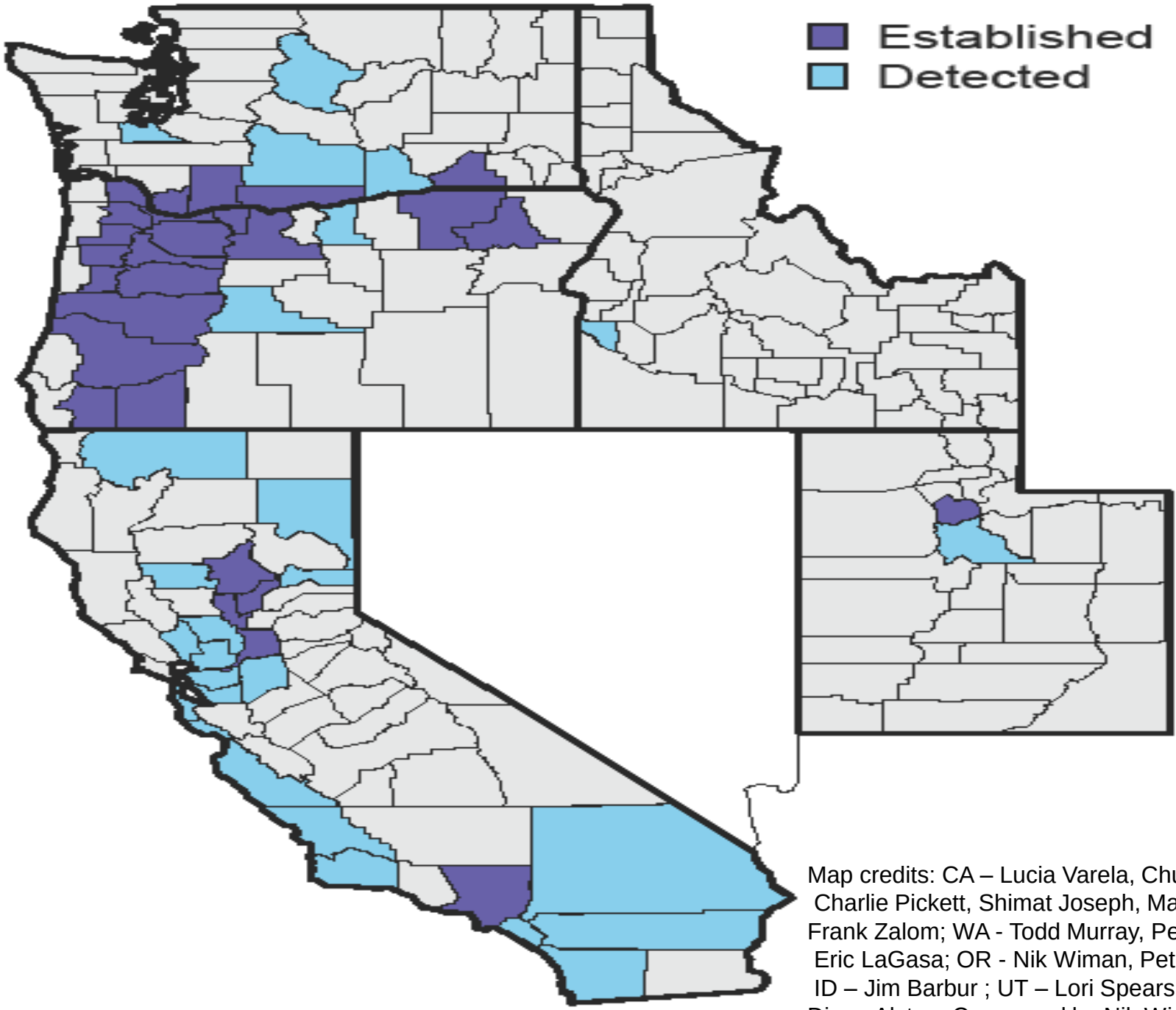
Distribution of Bagrada bug in California

September, 2014

Surendra Dara, UCCE



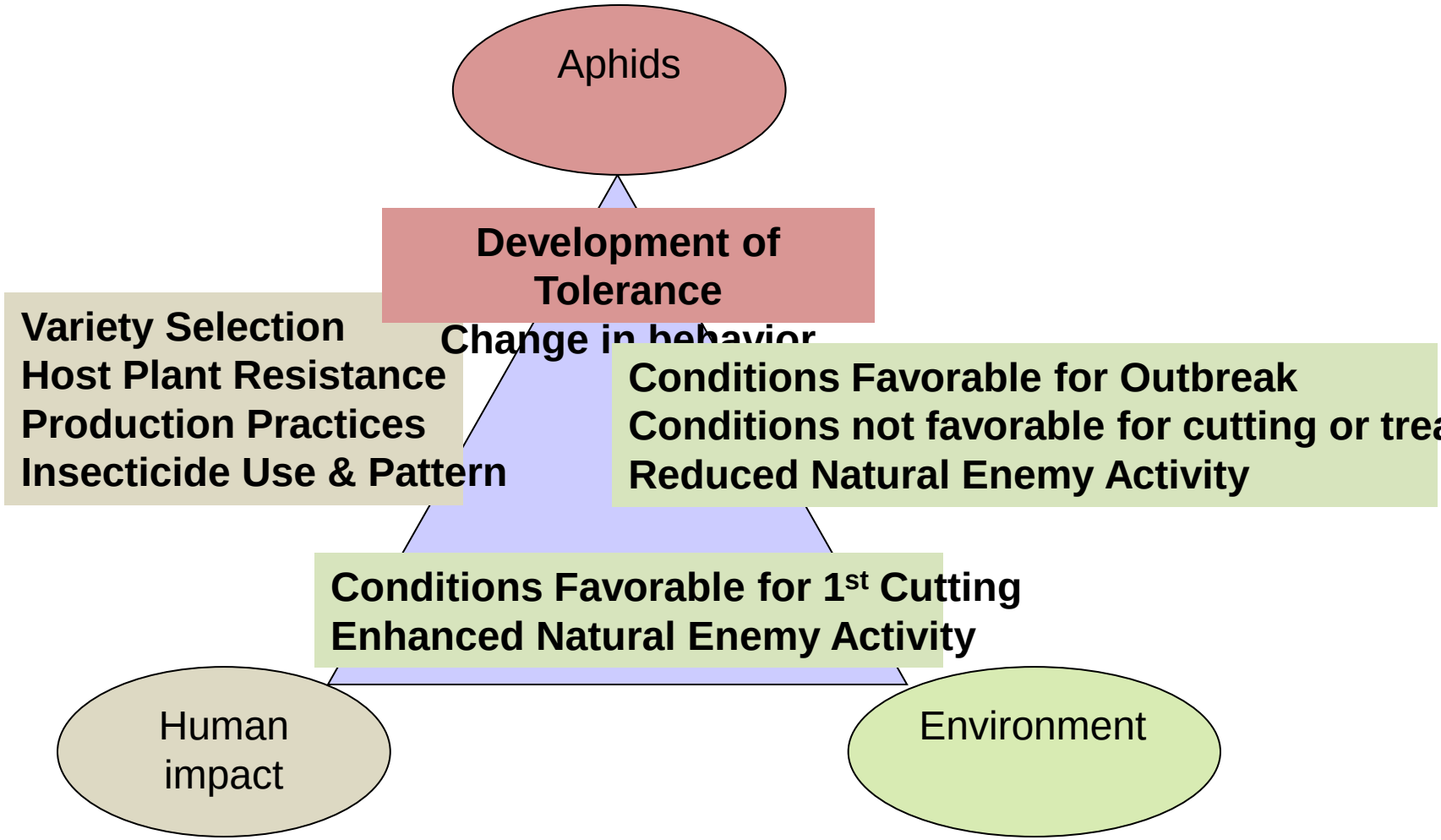
UC CE



Map credits: CA – Lucia Varela, Chuck Ingels, Charlie Pickett, Shimat Joseph, Mark Hoddle, Frank Zalom; WA - Todd Murray, Peter Landolt, Eric LaGasa; OR - Nik Wiman, Peter Shearer; ID – Jim Barbur ; UT – Lori Spears, Diane Alston. Composed by Nik Wiman, OSU.

Outbreaks Reported 2013

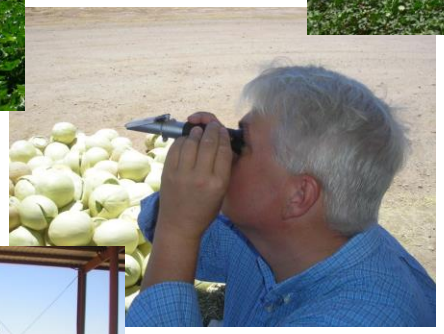
Outbreaks Are Complex Events



Natural enemies

Action Thresholds

Plant Height	Pea Aphids	Blue Alfalfa Aphids
Under 10 inches	40 to 50 per stem	10 to 12 per stem
10 to 20 inches	70 to 80 per stem	40 to 50 per stem
Over 20 inches	100 + per stem	40 to 50 per stem




Alfalfa is a Forgiving Crop...
BUT...
Problems during stand establishment can
lead to ½ to 2 ton/year differences each y
Lack of proper soil preparation, leveling
Improper planting date, depth, distribution
Excessive weed competition
Growers do not really see these differenc
no opportunity
pare.

Thanks go to;

James Gregory
Ryan Palma
Israel Gulliver
Derek Cormell
Christopher Judd
Jacob Penley
Christian Reichie
Stephen Hernadez
Luna Gudalupe

Thanks for your attention