

# CALIFORNIA'S PESTICIDE RESIDUE MONITORING PROGRAM



**BRANDI MARTIN**  
**CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION**  
**ENFORCEMENT-CENTRAL REGIONAL OFFICE**  
**JULY 2018**

# HISTORY OF RESIDUE MONITORING IN CALIFORNIA



# HISTORY OF RESIDUE MONITORING IN CALIFORNIA



- **1920s-** Began analyzing produce for pesticide residues, such as **arsenic** compounds
- **1940s-** California's residue monitoring expanded to test for **DDT** and other organic compounds >> in response to the introduction of many new pesticides
- **July 1985-** Widespread illnesses reported in consumers of **California-grown watermelons** (Temik-Aldicarb)
- **Recent Decades-** Samples Analyzed via multi-residue screens capable of detecting over **200** produce samples' pesticide residues.

# HISTORY OF RESIDUE MONITORING IN CALIFORNIA



- **1991**-Pesticide regulation separated from CDFA. The Department of Pesticide Regulation (DPR) was created at Cal EPA. DPR contracts with CDFA Center for Analytical Chemistry for analytical services.
- **2003 to Present**- Enforcement Branch's three Regional Offices collect **3,000 to 3,600** produce samples annually. Samples are analyzed by Sacramento and Anaheim Pesticide Residue laboratories.

# HISTORY OF RESIDUE MONITORING IN CALIFORNIA



- **2012-** CDFA Pesticide Residue Laboratory in Sacramento Implemented LCMSMS and GCMSMS pesticide residue screens capable of detecting approximately **300 pesticide compounds**.
- **2013-** CDFA Pesticide Residue Laboratory in Anaheim implemented LCMSMS screen
- **2014-** CDFA Anaheim Laboratory implemented GCMSMS screen.
- **2017-** DPR's residue monitoring program remains the **most extensive state-run residue monitoring program in the nation**.

# GOALS OF THE CALIFORNIA PESTICIDE RESIDUE MONITORING PROGRAM



- DPR'S MISSION STATEMENT:
  - “DPR has primary responsibility for regulating all aspects of pesticide sales and use to protect public health and the environment.”
  - DPR fulfills this by:
    - ✦ Pesticide product evaluation and registration
    - ✦ Continues through product compliance, pesticide use enforcement, and environmental monitoring
    - ✦ Then the final check is through the California Pesticide Residue Monitoring Program>>>>





# AUTHORITY AND SCOPE OF DPR'S RESIDUE MONITORING PROGRAM



- CALIFORNIA FOOD AND AGRICULTURAL CODE (FAC)
  - Authorizes and requires DPR to conduct a program to monitor pesticide residues on “produce”
    - ✦ **“Produce”**: *“...any food in its raw or natural state which is in such form as to indicate that it is intended for consumer use with or without any or further processing”*
- CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (DPH)
  - Responsibility for monitoring pesticide residues in “processed” foods
    - ✦ **“Processed”**:
      - Dried fruits, nuts, and beans (these have been “physically altered” by “thermal processes”) and
      - Raw vegetables that have been sliced or chopped (these have been “physically altered” by “mechanical processes”)

# PURPOSE OF SAMPLING





- Goal of preventing “public exposure to illegal pesticide residues” (FAC 12532)
- Focus on children’s diet, carcinogens, historical problems, and data needs.
- Initiate enforcement action for violators





**State of California**  
**Department of Pesticide Regulation**  
**Enforcement Branch**  
**Headquarters and Regional Offices**

-  Headquarters
-  Regional Office



**Headquarters**

1001 I Street, P.O. Box 4015  
 Sacramento, CA 95812-4015  
 Tel.: (916) 324-4100; FAX: (916) 445-3907  
[www.cdpr.ca.gov](http://www.cdpr.ca.gov)  
 Donna Marciano, Enforcement Branch Chief

**Northern Regional Office (NRO)**

3210 Beacon Boulevard  
 West Sacramento, CA 95691-3444  
 Tel.: (916) 376-8960; FAX: (916) 376-8973  
 Manager: Ken Everett  
 E-mail: [Ken.Everett@cdpr.ca.gov](mailto:Ken.Everett@cdpr.ca.gov)  
 Supervisor: Fidel Perez  
 E-mail: [Fidel.Perez@cdpr.ca.gov](mailto:Fidel.Perez@cdpr.ca.gov)

**Central Regional Office (CRO)**

395 W. Spruce Avenue, Suite 103  
 Clovis, CA 93611-8706  
 Tel.: (559) 297-3511; FAX: (559) 297-5417  
 Manager: (Vacant)  
 E-mail:  
 Supervisor: Louie Guerra  
 E-mail: [Louie.Guerra@cdpr.ca.gov](mailto:Louie.Guerra@cdpr.ca.gov)

**Southern Regional Office (SRO)**

130 S. Chaparral Court, Suite 130  
 Anaheim, CA 92808-2238  
 Tel.: (714) 279-7690; FAX: (714) 279-7692  
 Manager: Jahan Motakef  
 E-mail: [Jahan.Motakef@cdpr.ca.gov](mailto:Jahan.Motakef@cdpr.ca.gov)  
 Supervisor: Peggy Byerly  
 E-mail: [Peggy.Byerly@cdpr.ca.gov](mailto:Peggy.Byerly@cdpr.ca.gov)

**Headquarters**

Manager: Regina Sarracino  
 E-mail: [Regina.Sarracino@cdpr.ca.gov](mailto:Regina.Sarracino@cdpr.ca.gov)  
 Manager: Joshua Ogawa  
 E-mail: [Joshua.Ogawa@cdpr.ca.gov](mailto:Joshua.Ogawa@cdpr.ca.gov)  
 Supervisor: Parissa Naef  
 E-mail: [Parissa.Naef@cdpr.ca.gov](mailto:Parissa.Naef@cdpr.ca.gov)  
 Supervisor: Patrick Thalken  
 E-mail: [Patrick.Thalken@cdpr.ca.gov](mailto:Patrick.Thalken@cdpr.ca.gov)



[www.cdpr.ca.gov/docs/enforce/romap.pdf](http://www.cdpr.ca.gov/docs/enforce/romap.pdf)  
 (Effective 7/01/2017)

# GOALS OF THE CALIFORNIA PESTICIDE RESIDUE MONITORING PROGRAM



1. MONITOR PESTICIDE RESIDUES IN FRESH PRODUCE THROUGHOUT THE CALIFORNIA FOOD SUPPLY:

- Sample commonly consumed commodities
  - ✦ Special emphasis on infants and children
  - ✦ Pesticides listed as causing cancer or reproductive toxicity
  - ✦ Commodities consumed by different ethnic and socioeconomic groups



2. IDENTIFY SPECIFIC COMMODITIES THAT HAVE A HIGHER INCIDENCE OF ILLEGAL RESIDUES (2015)

(GINGER, CACTUS, LIME, TOMATILLOS, SPINACH, ETC.)



# GOALS OF THE CALIFORNIA PESTICIDE RESIDUE MONITORING PROGRAM



3. GENERATE SAMPLE DATA REQUESTED BY DPR'S **HUMAN HEALTH ASSESSMENT BRANCH**-TO CONDUCT RISK ASSESSMENTS OF PARTICULAR PESTICIDES
4. HELP KEEP PRODUCE WITH ILLEGAL RESIDUES OUT OF THE MARKETPLACE



# RESIDUE VS. TOLERANCE



- Residue = actual amount of contaminant on produce
- Tolerance = maximum amount allowed on produce
  - Example: tolerance for acephate on brussel sprouts is 3 ppm, so hopefully residue is 3 ppm or less.
- Tolerances are set by **U.S. EPA**, nation-wide.
- If a crop is on the CA pesticide label >> there is a tolerance for that pesticide on that crop.
  - If not, probably no tolerance (it would be against the law to apply that pesticide to that commodity).



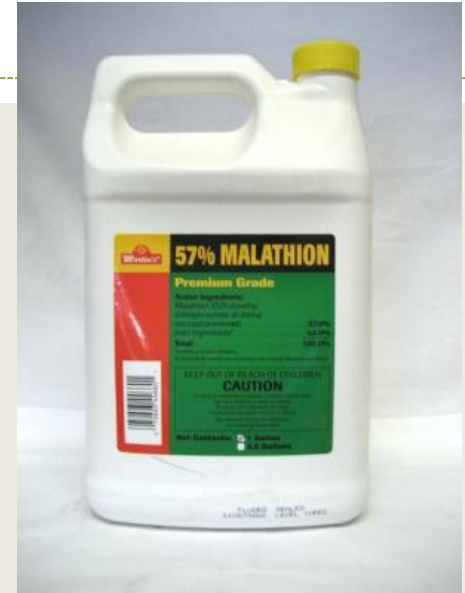
# TWO SITUATIONS WHEN A PESTICIDE RESIDUE IS ILLEGAL



- For a particular pesticide on a particular commodity:
  1. U.S. EPA has already established a legal tolerance, but the amount of residue is over that tolerance (an “over tolerance” violation).

Ex.: tolerance for **malathion** on **apples** is.....  
(Take a look at table on next page)

- What amount of **malathion** residue on **apples** would be illegal ?
- Answer: ???



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**§180.111 Malathion; tolerances for residues.**

(a) *General.* (1) Tolerances are established for residues of the insecticide malathion (O,O-dimethyl dithiophosphate of diethyl mercaptosuccinate) in or on the following food commodities:

Commodity	Parts per million
Alfalfa, forage	135
Alfalfa, hay	135
Almond, hulls	50
Almond, postharvest	8
Apple	8
Apricot	8
Asparagus	8
Avocado	8
Barley, grain, postharvest	8
Bean, dry, seed	8
Bean, succulent	8
Beet, garden, roots	8
Beet, garden, tops	8
Beet, sugar, roots	1
Beet, sugar, tops	8
Blackberry	8
Blueberry	8
Boysenberry	8
Carrot, roots	8
Chayote, fruit	8
Chayote, roots	8
Cherry	8
Chestnut	1



# TWO SITUATIONS WHEN A PESTICIDE RESIDUE IS ILLEGAL



- For a particular pesticide on a particular commodity:

2. U.S. EPA has not established any tolerance on this commodity (a “NTE” violation).

Ex.: U.S. EPA has **not** established a tolerance on **plums** for **Maneb 80WP**

- What amount of **Maneb 80WP** residue on **plums** would be illegal ?
- Answer: ???



maneb applications are registered under 40 CFR 160.515.

(d) *Indirect or inadvertent residues.* [Reserved]

[63 FR 13542, Mar. 20, 1998, as amended at 67 FR 49615, July 31, 2002; 73 FR 5108, Jan. 29, 2008; 75 FR 60237, Sept. 29, 2010]

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**§180.110 Maneb; tolerances for residues.**

(a) *General.* Tolerances for residues of the fungicide maneb (manganous ethylenebisdithiocarbamate), calculated as zinc ethylenebisdithiocarbamate, are established in or on raw agricultural commodities in the following table:

Commodity	Parts per million	Expiration/revocation date
Almond	0.1	12/31/12
Apple	2	12/31/12
Apricot	10	12/31/12
Banana (not more than 0.5 part per million shall be in the pulp after peel is removed and discarded (preharvest application only))	4	12/31/12
Bean, dry, seed	7	12/31/12
Bean, succulent	10	12/31/12
Beet, sugar, tops	45	12/31/12
Broccoli	10	12/31/12
Brussels sprouts	10	12/31/12
Cabbage	10	12/31/12
Cabbage, Chinese, bok choy	10	12/31/12
Cabbage, Chinese, napa	10	12/31/12
Carrot, roots	7	12/31/12
Cauliflower	10	12/31/12
Celery	5	12/31/12
Collards	10	12/31/12
Corn, sweet, kernel plus cob with husks removed	5	12/31/12
Cranberry	7	12/31/12
Cucumber	4	12/31/12
Eggplant	7	12/31/12
Endive	10	12/31/12
Fig	7	12/31/12
Grape	7	12/31/12
Kale	10	12/31/12
Kohlrabi	10	12/31/12
Lettuce	10	12/31/12
Melon	4	12/31/12
Mustard greens	10	12/31/12
Nectarine	10	12/31/12
Onion	7	12/31/12
Papaya	10	12/31/12
Peach	10	12/31/12
Pepper	7	12/31/12
Potato	0.1	12/31/12
Pumpkin	7	12/31/12
Squash, summer	4	12/31/12

# GOALS OF THE CALIFORNIA PESTICIDE RESIDUE MONITORING PROGRAM



- HOW DO WE KEEP PRODUCE WITH ILLEGAL RESIDUES OUT OF THE MARKETPLACE?

IF ILLEGAL RESIDUES ARE DETECTED (*FAC 12671-12674*):

1. DPR immediately **removes the illegal produce** from sale
2. DPR **traces the distribution of the illegal produce** by contacting distributors throughout California, imposing quarantines and conducting extra sampling as needed
3. DPR can **levy fines on distributors** for residue violations
4. If investigators find that California farmers used pesticides illegally, the **farmers can also be fined**. (*2013 Santa Cruz strawberry case-methomyl*)

# MONITORING



- Sampling
- Analyzing





# Food Safety Pesticide Residue Team



# SAMPLES PREPARED FOR ANALYSIS





# SAMPLE ANALYSIS



<b>“Old ” Detect &gt; 200 Pesticide Residues</b>	<b>“New” Detect &gt; 300 Pesticide Residues</b>
<b>OP (Organophosphate)</b>	<b>LC/MS (Liquid Chromatograph/ Mass Spectrometer)</b>
<b>CH (Chlorinated Hydrocarbon)</b>	<b>GC/MS (Gas Chromatograph/ Mass Spectrometer)</b>
<b>N-Methyl Carbamate</b>	<b>-----</b>



For most pesticides detected with  
LC/MS and GC/MS Screens:  
Minimum Detection Limit = 0.01 ppm

# PRM- REPORTING

STATE OF CALIFORNIA - DEPARTMENT OF PESTICIDE REGULATION / ENFORCEMENT BRANCH  
**PRODUCE SAMPLE ANALYSIS REPORT**  
 DPR-ENF-002 (REV. 07/13) PAGE 1 OF 2

1414WU1486

LABORATORY NUMBER

**A. Type of Sample**

<input checked="" type="checkbox"/> ORIGINAL SAMPLE	<input type="checkbox"/> OTHER (Specify) _____	QUARANTINE NUMBER	T-CASE NUMBER
<input type="checkbox"/> FOLLOW-UP			

**B. Sample Site**

<input type="checkbox"/> CHAIN DISTRIBUTION	<input type="checkbox"/> POINT OF ORIGIN	<input type="checkbox"/> FARMERS MARKET	<input type="checkbox"/> PACKING SHED	<input type="checkbox"/> ROADSIDE STAND	<input type="checkbox"/> POINT OF ENTRY
<input type="checkbox"/> WHOLESALE	<input checked="" type="checkbox"/> RETAIL	<input type="checkbox"/> PROCESSING PLANT	<input type="checkbox"/> OTHER (Specify) _____		

**C. Sample Location and Identity**

SAMPLE NUMBER <u>LT-04</u>	COMMODITY (Variety) <u>Sweet Potato / Yam</u>	COUNTY CODE WHERE SAMPLED <u>27</u>	ORIGIN CODE <u>1CA</u>
SAMPLE SIZE <u>2<sup>nd</sup> plus</u>	LOT SIZE/CONTAINER QUANTITY <u>1</u>	CONTAINER DESCRIPTION <u>Cardboard Box</u>	LOT NUMBER/OTHER I.D. NUMBER <u>See Comments</u>
BRAND NAME <u>Classic - Medium Sweet Potato</u>			ORGANIC PRODUCE <input type="checkbox"/> YES

COLLECTION SITE (Name, Address, City, State, ZIP Code)  
Farmers Food Market 246 Alta Gonzales CA 93926


GROWER name found  
 (Name, Address, City, Telephone Number)

PACKER/SHIPPER name found  
 (Name, Address, City, Telephone Number)

DEALER/DISTRIBUTOR Classic Yam Inc P.O. Box 744 Livingston CA 95334  
 (Name, Address, City, Telephone Number)

COMMENTS Col) 108 561 4806 3084 (16) 6-6 102113 PO# 0 / Ln-2 07-14-2014

Traceable @ HarvestMark.com 27 82 0769 7333 CLY1

SAMPLE COLLECTOR (PRINT NAME) <u>Leonard Herrera</u>	SIGNATURE 	DUPLICATE SAMPLE <input checked="" type="checkbox"/> NOT REQUESTED <input type="checkbox"/> REQUESTED/ PROVIDED
DATE SAMPLED <u>08/04/2014</u>	TIME SAMPLED (AM/PM) <u>1108</u>	CONTACT PERSON - PLEASE PRINT LEGIBLY <u>Dale</u>
TELEPHONE NUMBER (include Area Code) <u>831-675-3081</u>	REGIONAL OFFICE NO. <u>3</u>	

**D. Chain of Custody (See page 2)**

**E. Laboratory Determination - Results relate only to the sample tested**

(ADDITIONAL SPACE FOR ANALYSES ON PAGE 2)

ANALYSIS REQUESTED <input checked="" type="checkbox"/> PESTICIDE SCREENS	PESTICIDE DETECTED	AMOUNT (ppm)	TOLERANCE (ppm)	DET. LIMIT (ppm)	EXT. CODE	DET. CODE/ ANALYST INITIALS
	<u>None</u>				<u>805</u>	<u>SZM</u>
	<u>peroxyfl butoxide</u>	<u>0.037</u>	<u>exempt</u>	<u>0.01</u>	<u>805</u>	<u>35CM</u>
	<u>chlorpropham</u>	<u>0.042</u>	<u>NTE*</u>	<u>0.01</u>	<u>↓</u>	<u>↓</u>
<u>* according to E-CFR 180.18 confirmed on GCmsms CM 8/7/14</u>						

# QUARANTINE NOTICE

STATE OF CALIFORNIA  
**PRODUCE QUARANTINE NOTICE AND  
 REMOVAL FROM SALE ORDER**  
 DPR-ENF-203 (REV. 4-11) PAGE 1 OF 2

DEPARTMENT OF PESTICIDE REGULATION  
 ENFORCEMENT BRANCH

## A. Quarantine Information


ISSUED TO (Owner/Possessor of the produce) Classic Yam Inc./Robert Silveira		TELEPHONE NUMBER (include Area Code) 209-394-8656	QUARANTINE NUMBER 14BM0808-01
ADDRESS (Location) P.O. Box 744 /11715 Longview Road			QUARANTINE DATE 08/08/14
CITY Livingston/ Atwater	ZIP CODE 95334/ 95301		QUARANTINE TIME 11:15 hours
PRODUCE OR COMMODITY (If not labeled, state common name) Classic-Medium Sweet Potato (White)			REFERENCE/FOLLOW-UP NUMBER T-158-C14
IDENTIFICATION OR LABELING - Include LOT NUMBER and USE-BY date, if present, AND type of container G-6			QUANTITY X CONTAINER SIZE 1 X 900lb bin
PACKER/SHIPPER/GROWER/DISTRIBUTOR Classic Yam Inc.	CITY Atwater	STATE CA	ZIP CODE 95301
PRODUCE OR COMMODITY DELIVERY RECEIVED DATE 07/14/14	BILL OF LADING/INVOICE NUMBER N/A	FDA ENTRY NUMBER (11 digits) N/A	

## B. Nature of Quarantine (Complete Either "1" or "2", and Other Sections as Appropriate)

1. This lot of produce **is carrying** pesticide residue (check one):  
 In excess of the legal tolerance.       No tolerance has been established.  
 Therefore, packing, shipping, and/or selling this lot is a violation of Food and Agricultural (FAC) section 12671.  
 Pesticide Name: \_\_\_\_\_ Residue Level: \_\_\_\_\_ CDFA Lab. No.: \_\_\_\_\_  
**This lot is quarantined**, as authorized under FAC section 12601. This lot will remain quarantined until released by a representative of the California Department of Pesticide Regulation (DPR). DPR contact information is listed below. It is unlawful to move or disturb quarantined produce except under specific DPR direction (see FAC section 12603).
2. This lot of produce **is suspected** of carrying pesticide residue (check one):  
 In excess of the legal tolerance.       No tolerance has been established.  
**This lot is quarantined**, as authorized under FAC section 12601. DPR will sample and analyze the produce, as authorized under FAC sections 12581 and 12604. It is unlawful to pack, ship, or sell produce that carries pesticide residue that does not comply with legal tolerances (see FAC section 12671).
- 3a. Did DPR collect duplicate samples?     YES     NO      3b. Did Owner/Possessor collect samples?     YES     NO
4. Comments: DPR will collect a 2 lb sample of the above commodity on 8/11/14 at 0800 hours of Lot G-6 at your facility.  
Owner has also confirmed they will be taking their own sample of the same lot to submit to an independent lab for pesticide analysis.

## C. See "Important Information" on Page 2

## D. Signature and Contact Information

OWNER'S/POSSESSOR'S SIGNATURE 	OWNER'S/POSSESSOR'S NAME (Print name) Robert Silveira	DATE SIGNED 8/08/2014
NOTICE ISSUED BY (Print name) Brandi M. Martin, Environmental Scientist	DPR REGIONAL OFFICE Central	REGIONAL OFFICE TELEPHONE NUMBER 559-243-8111

# RUSH ANALYSIS

R14U00004

STATE OF CALIFORNIA - DEPARTMENT OF PESTICIDE REGULATION / ENFORCEMENT BRANCH  
**PRODUCE SAMPLE ANALYSIS REPORT**  
 DPR-ENF-002 (REV. 07/13) PAGE 1 OF 2

LABORATORY NUMBER

**A. Type of Sample**

<input type="checkbox"/> ORIGINAL SAMPLE	<input checked="" type="checkbox"/> OTHER (Specify) <b>RUSH ANALYSIS</b>	QUARANTINE NUMBER	T-CASE NUMBER
<input type="checkbox"/> FOLLOW-UP	<b>Sample from Classic Yam Inc. facility</b>	<b>14BM0808-01</b>	<b>T-158-C14</b>

**B. Sample Site**

<input type="checkbox"/> CHAIN DISTRIBUTION	<input type="checkbox"/> POINT OF ORIGIN	<input type="checkbox"/> FARMERS MARKET	<input type="checkbox"/> PACKING SHED	<input type="checkbox"/> ROADSIDE STAND	<input type="checkbox"/> POINT OF ENTRY
<input type="checkbox"/> WHOLESALE	<input type="checkbox"/> RETAIL	<input type="checkbox"/> PROCESSING PLANT	<input checked="" type="checkbox"/> OTHER (Specify) <b>Storage Facility</b>		

**C. Sample Location and Identity**

SAMPLE NUMBER <b>BM-1</b>	COMMODITY (Variety) <b>Sweet Potatoes (White Yam)</b>	COUNTY CODE WHERE SAMPLED <b>24</b>	ORIGIN CODE <b>1CA</b>
SAMPLE SIZE <b>4lbs</b>	LOT SIZE/CONTAINER QUANTITY <b>900lb</b>	CONTAINER DESCRIPTION <b>Wooden Bin</b>	LOT NUMBER/OTHER I.D. NUMBER <b>G-6 (Tied to Lab #R14M01486)</b>
BRAND NAME <b>Classic</b>	COLLECTION SITE (Name, Address, City, State, ZIP Code) <b>11715 Longview Road Livingston, CA 95301</b>		ORGANIC PRODUCE <input type="checkbox"/> YES

GROWER **Classic Yam Inc. 11715 Longview Road Livingston, CA 95301**  
 (Name, Address, City, Telephone Number)

PACKER/SHIPPER **Classic Yam Inc. 11715 Longview Road Livingston, CA 95301**  
 (Name, Address, City, Telephone Number)

DEALER/DISTRIBUTOR **Classic Yam Inc. 11715 Longview Road Livingston, CA 95301**  
 (Name, Address, City, Telephone Number)

COMMENTS **These sweet potatoes are suspected of carrying pesticide residue of chlorpropham--NTE on sweet potatoes**

SAMPLE COLLECTOR (PRINT NAME) <b>Brandi M. Martin</b>	SIGNATURE	DUPLICATE SAMPLE <input checked="" type="checkbox"/> NOT REQUESTED <input type="checkbox"/> REQUESTED/PROVIDED
DATE SAMPLED <b>8/11/14</b>	TIME SAMPLED (AM/PM) <b>9:00 AM</b>	CONTACT PERSON - PLEASE PRINT LEGIBLY <b>Ms. Dodie Gauger</b>
TELEPHONE NUMBER (Include Area Code) <b>209-394-8656</b>		REGIONAL OFFICE NO. <b>3</b>

**D. Chain of Custody (See page 2)**

**E. Laboratory Determination - Results relate only to the sample tested** (ADDITIONAL SPACE FOR ANALYSES ON PAGE 2)

ANALYSIS REQUESTED <input type="checkbox"/> PESTICIDE SCREENS	PESTICIDE DETECTED	AMOUNT (ppm)	TOLERANCE (ppm)	DET. LIMIT (ppm)	EXT. CODE	DET. CODE/ ANALYST INITIALS
Chlorpropham	<i>None</i>				<i>805</i>	<i>35C/A</i>

LABORATORY NAME <b>CDEA Center For Analytical Chemistry</b>	CHEMIST'S SIGNATURE <i>[Signature]</i>	DATE RECEIVED BY LAB. <b>8/13/14</b>
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# DPR'S RANGE OF SAMPLING AND MONITORING



- DPR MONITORS BOTH DOMESTIC AND IMPORTED PRODUCE
  - 2015 samples: **3,600** samples of more than 145 kinds of produce

Domestic	Imported
58%	42%

- DPR monitors both **conventionally**-produced and **organically**-produced commodities
- DPR collects samples throughout the channels of trade, including:
  - ✦ Packing houses, points of origin (field packing locations), distribution centers of supermarket chains, wholesale and retail outlets, and farmers' markets>>>3CCR 6140 allows this.



# DPR's 2015 PESTICIDE RESIDUE MONITORING DATA



- In 2015, the 3,600 samples of more than 145 types of domestic and imported produce, resulted in 95.7% of produce samples tested complied with allowable limits, including:

39.8%	1,434 samples	No pesticide residue detected
55.8%	2,010 samples	Residues w/in allowable levels
4.3%	156 samples	Illegal residues (OT/NTE)

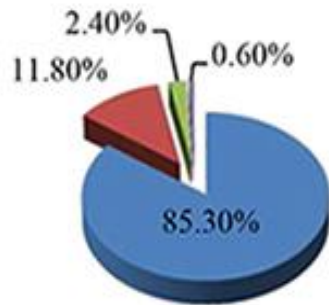
- The California-grown commodities tested had an even better safety record. Of the 906 samples of California produce, 97.3%, or 882 samples, complied with allowable limits. (24 Illegal Residues)
- In 2015, DPR detected illegal pesticide residues most frequently on:

Mexico	California	China
Cactus (Pads/Fruit)	Spinach	Ginger
Limes	Kale	Longan
Tomatillo	Strawberry	Lychee
Chili Peppers	Daikon	
Summer Squash		





# DPR's 2015 ORGANIC PRODUCE SAMPLE RESULTS



- No pesticide residues detected
- Pesticide residues detected that are acceptable under the CDFA Organic Program
- Pesticide residues detected that are unacceptable under the CDFA Organic Program, but acceptable if conventionally grown.
- Pesticide residues detected that are unacceptable under the CDFA Organic Program, and are overtolerance or there is no tolerance established.

# “PENALTIES” WHEN DPR DETECTS ILLEGAL RESIDUES



- Stop sale of the contaminated lot in CA
  - (loss of the value of that lot)
- Publish results annually on DPR website
  - (potential loss of customers)
- Civil penalties against repeat offenders
  - DPR also has the **authority to levy civil penalties against anyone who packs, ships or sells produce** with illegal pesticide residues.
    - In 2014, DPR established a policy to identify companies that are repeatedly the first business to sell produce with illegal residues in California, meet with those companies to gain compliance, and **fine companies if they continue to be the first to sell produce with illegal residues in California.**
    - **2015**, DPR imposed civil penalties from **\$6,000-\$15,000** against **five** California produce importers with a recurring history-mostly on produce imported from **Mexico and China**  
([http://www.cdpr.ca.gov/docs/mill/actions/pesticide\\_residue.htm](http://www.cdpr.ca.gov/docs/mill/actions/pesticide_residue.htm))

# WHEN CONTAMINATED PRODUCE IS GROWN IN CA



The following additional enforcement actions take place:

1. DPR Contacts the Agricultural Commissioner's Office in County where commodity grown and provides any information it knows about the source of the commodity.
2. County will investigate to determine whether residue is the result of a misapplication or drift. (DPR ENF-127)
3. Could result in destruction of crop, stop harvest of crop remaining in the field and/or civil penalties.

# CAC CONDUCTS FOOD SAFETY INVESTIGATION



STATE OF CALIFORNIA  
**PESTICIDE EPISODE INVESTIGATION REPORT**  
 PR-ENF-127 (REV. 7/00)

DEPARTMENT OF PESTICIDE REGULATION  
 PESTICIDE ENFORCEMENT BRANCH  
 PAGE \_\_\_\_\_ OF \_\_\_\_\_

RECEIVED BY	RECEIVED FROM	REPRESENTING	DATE/TIME RECEIVED	<input type="checkbox"/> AM <input type="checkbox"/> PM	PERSON NOTIFIED	DATE
TYPE OF EPISODE		PRIORITY INVESTIGATION		PERSON NOTIFIED		
<input type="checkbox"/> HUMAN EFFECTS # _____	<input type="checkbox"/> ENVIRONMENTAL EFFECTS	<input type="checkbox"/> YES # _____ <input type="checkbox"/> NO		DFA	_____	
<input type="checkbox"/> PROPERTY LOSS \$ _____	<input type="checkbox"/> OTHER			DFG	_____	
OTHER I.D. NO.	COUNTY OF OCCURRENCE	DATE OF OCCURRENCE	TIME	DHS	_____	
		MO DAY YR	<input type="checkbox"/> AM <input type="checkbox"/> PM	DIR	_____	
EPISODE LOCATION				EPA	_____	
				CAC	_____	
				OTHER	_____	

**INJURED/COMPLAINANT INFORMATION**

COMPLAINT SIGNED		DR. VISITED		EXTENT OF INJURY/ILLNESS		ACTIVITY OF PERSON EXPOSED/INVOLVED				
<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A	<input type="checkbox"/> Fatal	<input type="checkbox"/> Symptoms	<input type="checkbox"/> Mixer/Loader	<input type="checkbox"/> Field Worker*	<input type="checkbox"/> Other*
				<input type="checkbox"/> Serious	<input type="checkbox"/> Exposed Only	<input type="checkbox"/> Applicator	<input type="checkbox"/> Public*	Explain _____		
NAME				AGE	SEX	WHS NO.	WORKDAYS LOST			
ADDRESS				CITY		ZIP	PHONE			
MEDICAL FACILITY NAME				<input type="checkbox"/> TREATMENT PROVIDED <input type="checkbox"/> OBSERVATION ONLY		HOSPITALIZED		DATE/TIME ADMITTED		DATE/TIME DISCHARGED
PHYSICIAN				ADDRESS		<input type="checkbox"/> YES <input type="checkbox"/> NO		PHONE		
SIGNS/SYMPTOMS EXPERIENCED										
EMPLOYER				ADDRESS				PHONE		

PROTECTIVE MEASURES USED			HANDS			INHALATION			OTHER			ENGINEERING CONTROLS		
EYES			Cloth/Leather Gloves			Dust Mask			Work Clothes			Closed System		
<input type="checkbox"/> Safety Glasses	<input type="checkbox"/>	<input type="checkbox"/>	Chem. Resistant Gloves			1/2 Face Respirator			Coveralls			Enclosed Cab		
<input type="checkbox"/> Goggles	<input type="checkbox"/>	<input type="checkbox"/>	Other _____			Full Face Respirator			Chem. Resistant Clothes			Enc. Cab w/Air Purification		
<input type="checkbox"/> Face shield	<input type="checkbox"/>	<input type="checkbox"/>	None			SCBA			Chem. Resistant Boots			Other _____		
<input type="checkbox"/> Eye/Sun Glasses	<input type="checkbox"/>	<input type="checkbox"/>				None			Head Covering			None		
<input type="checkbox"/> None	<input type="checkbox"/>	<input type="checkbox"/>							Other _____					

**ENVIRONMENTAL OR PROPERTY DAMAGE**

DESCRIPTION OF DAMAGE						AMOUNT/VALUE	
OWNER				ADDRESS		PHONE	

<b>ALLEGED RESPONDENT(S)</b>		PCA	<input type="checkbox"/>	DEALER	<input type="checkbox"/>	PILOT	<input type="checkbox"/>	GROWER	<input type="checkbox"/>	AGENCY	<input type="checkbox"/>	OTHER*	<input type="checkbox"/>
NAME		PHONE		LICENSE/PERMIT NO.		RECOMMENDATION MADE		<input type="checkbox"/> YES # _____ <input type="checkbox"/> NO					
ADDRESS				EMPLOYER'S NAME				PHONE					
CITY		STATE	ZIP	EMPLOYER'S ADDRESS									
EXPLAIN*				CITY				STATE		ZIP			

PESTICIDE NAME/MANUFACTURER	EPA REGISTRATION NUMBER	CATEGORY	DOSE/DILUTION/VOLUME	TREATMENT DATE	COMMODITY/SITE TREATED
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# WHAT TO INCLUDE IN YOUR CAC INVESTIGATION



## C. Standard Narrative Format

To facilitate well-organized and informative investigative reports, the report must include the following standard narrative elements. Non-priority antimicrobial investigations are exempt from this format requirement.

Summary: One paragraph summarizing the episode.

Background Information: Pertinent background information related to the episode.

Violations: List all violations of the laws, regulations, and labeling found during the investigation, including violations that did not contribute directly to the episode.

Witnesses: List of all witnesses involved in the episode. For each person, list his/her name, employer (if applicable), address, and telephone number.

Investigation and Statements: The narrative portion of the investigation report detailing how the episode occurred. Witness interview statements/summaries are included in this section. For each interview, state the date and time of the interview, who conducted the interview, how the investigator conducted the interview (i.e. in-person, over the telephone), where the investigator conducted the interview, the translator (if applicable), and if anyone else was present during the interview.

Findings: Summarize the investigative findings supported by the evidence. Provide summary information identifying and supporting the elements of any violations found during the investigation.

Attachments: List of supporting evidence for the episode investigation.



# ILLEGAL RESIDUE CASE



# ILLEGAL RESIDUE CASE



- Sample taken in our Southern Region
- 1.44 ppm Methomyl detected- NTE



# ILLEGAL RESIDUE CASE



- Traced back to a grower in Watsonville
- Investigation conducted by Santa Cruz CAC and DPR
- Over 50 foliage and fruit samples were taken and analyzed



# ILLEGAL RESIDUE CASE



- Investigative samples showed:
  - Uniform pattern of Methomyl residues in the field
  - No Methomyl residues in surrounding fields
  - Methomyl on and in the growers spray rig
  - ???
  - Eventual admission by the grower

# PRESS RELEASE

State Takes Enforcement Action Against Illegal Pesticide Use - Mozilla Firefox


File Edit View History Bookmarks ScrapBook Tools Help

cdpr.ca.gov/docs/pressrls/2013/130620.htm

Home Health & Safety Enforcement Pest Management Licensing Registration Monitoring Laws/Regulations

**POPULAR LINKS**

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- FAQ
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- Programs & Services
- Progress Report



- About DPR
- Contact Us
- Customer Service Survey
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**News**

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Contact: Charlotte Fadipe  
916-445-3974 [cfadipe@cdpr.ca.gov](mailto:cfadipe@cdpr.ca.gov)

June 20, 2013 (13-4)  
**FOR IMMEDIATE RELEASE**

**State Takes Enforcement Action Against Illegal Pesticide Use**  
Santa Cruz County Grower to Pay \$15,000 Fine; Strawberry Crop Ordered Destroyed

SACRAMENTO - Taking swift enforcement action, the California Department of Pesticide Regulation (DPR) ordered a Santa Cruz County grower to destroy 10 acres of strawberries, estimated to be worth about \$200,000, after an illegal pesticide was detected on the crop. In addition, the grower, V.L. Farms of Watsonville, has been ordered to pay a \$15,000 penalty.

The enforcement action comes after DPR's Residue Monitoring Program detected the pesticide methomyl on strawberries for sale in Los Angeles County. State and federal law prohibits the use of this pesticide on strawberries. A subsequent investigation by the Santa Cruz County Agricultural Commissioner and DPR also detected the pesticide on the crop and equipment at VL Farms, located at 1120 Buena Vista Rd. in Watsonville.

"This is a significant action that should deter anyone who considers breaking our regulations," said DPR Director Brian Leahy. "DPR works closely with local County Agricultural Commissioners to ensure that growers adhere to the state's stringent pesticide rules, which make California's produce the safest in the nation."

The investigation was initiated in May, after DPR's Residue Monitoring Program found illegal residues of methomyl on strawberries in retail outlets. A California Department of Food and Agriculture laboratory, using state-of-the-art testing equipment, detected 1.44 parts per million of methomyl. Methomyl is a [restricted material, PDF](#) (121 kb) that can only be used on crops listed on the label and with a permit issued by the County Agricultural Commissioner.




As a result, DPR ordered 1,093 cartons of strawberries removed from distributors and retail outlets. In addition V.L. Farms has been ordered to destroy the entire affected strawberry crop in the field.

The DPR investigation found a number of violations including:

- Using a pesticide in a manner that conflicts with the registered label
- Using the restricted pesticide without a written permit from the County Agricultural Commissioner
- Unlawful packing, shipping or selling of produce that carries pesticide in excess of the permissible level

See [settlement agreement, PDF](#) (131 kb)

The DPR Pesticide Residue Monitoring Program is the most extensive program of its kind in the nation. It collects about 3,500 produce samples annually from wholesale and retail stores, farmers markets and other outlets for testing at California Department of Food and Agriculture's laboratories. The laboratories test for more than 300 pesticides and breakdown products. Learn more about the CA [Pesticide Residue Monitoring Program](#).

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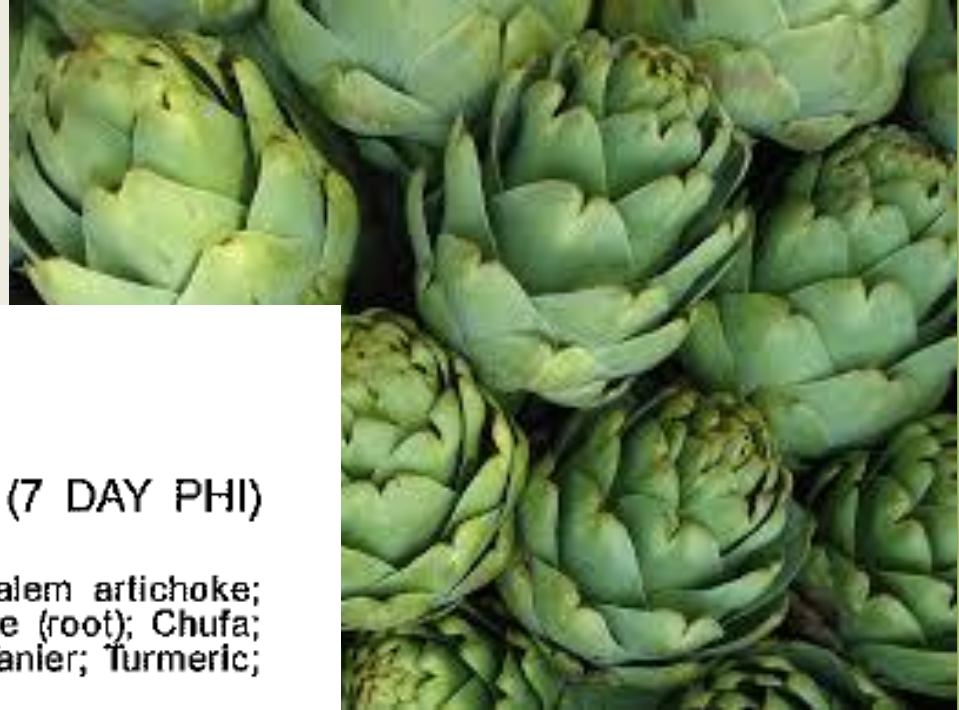
# SETTLEMENT AGREEMENT



- Destroy 10 acres of strawberries worth \$200,000



# Know The Difference Between Varieties



## TUBEROUS AND CORM VEGETABLES (7 DAY PHI) INCLUDING:

Arracacha; Arrowroot; Chinese artichoke; Jerusalem artichoke; Edible canna; Casava (bitter and sweet); Chayote (root); Chufa; Dasheen; Ginger; Leren; Potato; Sweet potato; Tanier; Turmeric; Yam Bean; Yam (true).

PESTS	Rate of Application		COMMENTS <sup>1,2,3</sup>
	Ounces Beleaf 50SG/Acre	Lbs. Active Ingredient/Acre	
Aphids and Plant Bugs	20 to 2.8	0.062 to 0.089	Begin applications before populations begin to build and before damage is evident, according to local

# SUMMARY FOR APPLICATORS



- Be sure that the commodity is on the label
- Follow the rate carefully
- Plan for the pre-harvest interval
- Make sure your spray equipment is cleaned out after every use
- Be careful not to drift on surrounding crops
- Don't intentionally use a pesticide that is not registered for that crop.





## SUMMARY



- Small percent of samples have illegal residues (4.3% or 156 Samples)
- Of the illegal residues most are **NOT** grown in California
- Very few of the illegal residues are considered health risks
- When illegal residues are found they are taken out of the channels of trade
- Residue Results available at:  
<http://www.cdpr.ca.gov>
  - Click on “A-Z Index”, then go to “Residue Monitoring Program”



# FOOD SAFETY-RESIDUE MONITORING INSPECTIONS



- **\*CA Residue Monitoring Inspection Video\***  
<https://www.youtube.com/watch?v=lHFVfBLU4w4>

# Any Questions???



- **Brandi M. Martin**  
Department of Pesticide Regulation  
Central Regional Office  
Senior Environmental Scientist  
559-297-5424  
[brandi.martin@cdpr.ca.gov](mailto:brandi.martin@cdpr.ca.gov)

