Agriculture and Drought: Implications for Food Security

Wednesday, July 21, 2015
12 pm – 1 pm

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Housekeeping

Recording and slides will be available at:

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Raise Hand Feature

We want to hear from you!

Join the discussion by using the **Raise Hand Feature**

To contact GoTo Webinar with technical difficulties, call: (855) 352-9002
Public Health Alliance Vision

All Southern California communities are healthy, vibrant and sustainable places to live, work and play.

9 Local Health Departments:
- Orange
- Long Beach (City)
- Los Angeles
- Pasadena (City)
- Riverside
- Santa Barbara
- San Bernardino
- San Diego
- Ventura

Nearly 60% of CA Population

http://phasocal.org/

A Partnership for Healthy Places
Today’s Speakers:

The Public Health Alliance of Southern California would like to thank our presenters for participating in this webinar and sharing their expertise.

Paula Daniels
Executive Director
California Central

John Krist
Executive Officer
Farm Bureau of Ventura County

Christy Porter
Founder and Executive Director
Hidden Harvest
California Agriculture

• 400+ agricultural commodities
  – Half of all US-grown fruits, vegetables, nuts

• California’s top-ten valued commodities (2013)
  – Milk — $7.6 billion
  – Almonds — $5.8 billion
  – Grapes — $5.6 billion
  – Cattle, Calves — $3.05 billion
  – Strawberries — $2.2 billion
  – Walnuts — $1.8 billion
  – Lettuce — $1.7 billion
  – Hay — $1.6 billion
  – Tomatoes — $1.2 billion
  – Nursery plants— $1.2 billion

• Agricultural exports: $21.24 billion (2013)
  – Almonds
  – Dairy and dairy products
  – Wine
Agricultural Water Use in California

California Water Use

- Wild & Scenic Rivers: 31%
- Irrigated Agriculture: 41%
- Urban: 10%
- Managed Wetlands: 2%
- Required Delta Outflow: 7%
- Instream Flows: 9%

(California Water Plan 2010)
Human Water Use: 44 million acre-feet per year
Agricultural Price of Surface Water

(Cost Per Acre-Foot)

North Coast | Colorado River Area | Sacramento River Area | San Joaquin River Area | Tulare Lake | South Coast | Central Coast

High Cost | Low Cost

$700

(LAO 2008)
Relative Water Footprint of Foods

Gallons of water per ounce of food

Proteins
- Lamb 84.68
- Chickpeas 76.07 gallons
- Soyburger 21.84
- Peas 44.53
- Goat 41.35
- Lentils 71.28
- Pork 41.25
- Chicken 16.61
- Eggs 11.73

Starches
- Beef 106.26
- Pasta 16.60
- Wheat bread 14.41
- Potatoes

Beverages
- Soymilk 20.53
- Wine
- Beer
- Grape juice
- Sparkling wine
- Apple juice
- Pineapple juice
- O.J.
- Mangoes 28.50
- Cherries 12.22
- Kiwi 9.05
- Blackberries
- Blueberries
- Spinach
- Avocados
- Oranges
- Cauliflower
- Carrots
- Cranberries
- Pineapples
- Peaches
- Onions

Fruits/vegetables
- Broccoli
- Watermelon
- Okra
- Cabbage
- Bananas
- Cabbage
- Strawberries
- Tomatoes
- Leeks
- Lettuce
Total Agricultural Water Use by Crop

(Pacific Institute 2015)
2010 data
Impacts of 2014 Drought on CA Agriculture

- Direct costs to agriculture total $1.5 billion (3% total ag value)
  - Revenue losses of $1 billion
  - $0.5 billion in additional pumping costs
- Loss of 17,100 seasonal and part-time jobs related to agriculture, 3.8% of farm unemployment
- 428,000 acres (5%) of irrigated cropland is going out of production in the Central Valley, Central Coast and Southern California due to the drought
- The Central Valley is hardest hit, particularly the Tulare Basin
- Central Coast and in Southern California agriculture less affected, with about 19,150 acres fallowed, $10 million in lost crop revenue and $6.3 million in additional pumping costs.

(UC Davis 2014)
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Hidden Harvest
Hidden Harvest “rescued” tomatoes
Hidden Harvest crew harvesting lettuce
Carrot harvest
Carrot harvest
Hidden Harvest crew harvesting peppers
Tomato plant
Sprinklers in Coachella Valley field
Group Discussion

Join the discussion by using the **Raise Hand Feature**

OR

Ask questions by using the **Q&A Feature**
Group Discussion

• What actions can local health departments take to encourage long-term production of diverse healthy foods in the region?

• Allow use of recycled/grey water – eliminate inconsistencies and more stringent rules at the municipal level

• Water security as food security issue – increase supply by reusing water for agriculture use

• Procurement policies to give growers more latitude

• Minimize obstacles for recycled water use

• Understanding how food is grown – people realize value of food and the water to produce it

• Ecosystem approach – affordable housing including food production as health benefit (including aquaponics)
Group Discussion

• Composting facilities are difficult to place
• Incentivize farmers to provide ecosystem services?
  – Prop. 1 incentives
  – AB 32 cap and trade funding for sustainable communities and ag. lands
    • Determining benefits to individual growers
  – Well managed soil
  – Food safety drives much of what growers do
Thank you to our speakers!

Paula Daniels  
John Krist  
Christy Porter
May 27 (12-1 pm): The Water Crisis and Health 101: An Introductory Webinar
June 24 (12-1 pm): Drought Impacts on Disadvantaged Communities: Mitigation Strategies
July 22 (12-1 pm): Agriculture and Drought: Implications for Food Security
August 26 (12-1 pm): Water and Emergency Preparedness: Innovation Opportunities
September 23 (12-1 pm): Thinking Local- The Role of Health Leadership in Water Recapture
October 28 (12-1 pm): Local Government Toolbox: Taking Action on Water
November 18 (12-1 pm): High Opportunity Levers for Water and Health: Resources, Policy and Next

**Who should attend?** Public Health Directors; County and City Health Officers; Chronic Disease Directors and lead staff; key water and health partners.

Learn more at: [http://www.phasocal.org/water-initiative/](http://www.phasocal.org/water-initiative/) or contact Katy Mamen at kmamen@PHASoCal.org
Water and Health Webinar Series

Drought, Climate and the Food We Eat (Nutrition)

July 22 (12-1 pm): Agriculture and Drought: Implications for Food Security
August 18 (2-3 pm): Our Diets and the Water Footprint of Regional Agriculture
September 15 (2-3 pm): Water Security for Community and Household Gardens: The Promise of Greywater
October 20 (2-3 pm): Emerging Water-Friendly Production Methods and Foods
November 18 (12-1 pm): High Opportunity Levers for Water and Health: Resources, Policy and Next Steps

http://phasocal.org/water-initiative-nutrition
Water and Health Webinar Series

- Water Crisis Strategies for Public Health Leaders
- Water, Drought and Environmental Health
- Drought, Climate and the Food We Eat (Nutrition)

http://phasocal.org/water-initiative
Agriculture and Drought: Implications for Food Security

Thank you for joining the conversation!

The recording and slides will be available shortly at http://phasocal.org/water-initiative/webinar-series-public-health-leadership/

Questions?
Contact Katy Mamen
Water Initiative Coordinator
kmamen@phasocal.org
(707) 239-8879