Nitrogen Management Training for Growers

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California Department of Food and Agriculture
Overview

- How did we get here?
- CCA Nitrogen Management Training Program
- Central Valley Grower Training Program in 2015-16
- Looking forward
How did we get here?
How did we get here?

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<th><strong>How did we get here?</strong></th>
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<tbody>
<tr>
<td><strong>TABLE DATA</strong></td>
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<tr>
<td>**13. ** N Removed (lbs/acre)</td>
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<td>**17. ** N Applied (lbs/acre)</td>
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<tr>
<td><strong>20. Total Available N Applied (lbs per acre)</strong></td>
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<td><strong>21. Nitrogen Credits (est)</strong></td>
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<td><strong>22. Available N carryover in soil; (annualized lbs/acre)</strong></td>
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<td><strong>23. N in irrigation water (annualized, lbs/acre)</strong></td>
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<tr>
<td><strong>24. Total N Credits (lbs per acre)</strong></td>
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<tr>
<td><strong>28. CERTIFIED BY:</strong></td>
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<td><strong>DATE:</strong></td>
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<td><strong>29. CERTIFICATION METHOD</strong></td>
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<td><strong>PLAN CERTIFICATION</strong></td>
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<td><strong>30. Low Vulnerability Area; No Certification Needed</strong></td>
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<td><strong>31. Self-Certified, approved training program attended</strong></td>
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<td><strong>32. Self-Certified, UC or NRCS site recommendation</strong></td>
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<tr>
<td><strong>33. Nitrogen Management Plan Specialist</strong></td>
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**Your Coalition will provide the method to be used to estimate N Removed.**

Provided by the Central Valley Water Board on 3 December 2014.
CCA Nitrogen Management Training Program

A cooperative effort by

UC ANR
CAPCA
CDFA

2014 - 2016, 9 training sessions
Over 800 CCAs completed training
CCA Nitrogen Management Training Program

Day One Agenda:

• Nutrient Management Regulations
• Nitrogen Forms, Transformations, Function, and Management in Agriculture
• Nitrogen Fertilizer Management
• Irrigation and Nitrogen Management
• Nitrogen Budgeting
• Nitrogen Management Tools and Resources
CCA Nitrogen Management Training Program

Day Two Agenda:

• Nitrogen Management in Permanent Crops
  • Region Specific: Almond, Walnut, Citrus, Avocado, etc.

• Nitrogen Management in Annual Crops
  • Region Specific: Cool Season Vegetables, Wheat, Processing Tomatoes, etc.
CCA Nitrogen Management Training Program

2017 CCA training meeting
Tentatively March 7-8, 2017
Check the FREP website for updates:

https://www.cdfa.ca.gov/is/ffldrs/frep/Outreach_Ed.html
# How did we get here?

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<td>14. Notes:</td>
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### PLAN CERTIFICATION

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Provided by the Central Valley Water Board 03 December 2014.
Grower Nitrogen Management Plan self-certification training

Curriculum Development

CCA training program condensed and adapted by Terry Prichard and Larry Schwankl – UC Davis/UC Cooperative Extension

• One-half-day training curriculum
• Two Case Study Modules – Annual (Silage Corn) and Perennial (Walnut)
• Test Questions
• Grower study guide
Grower Nitrogen Management Plan self-certification training

Curriculum

- Nitrogen and Groundwater Quality Issues
- Nitrogen in Crop Production Systems—The Nitrogen Cycle
- Nitrogen Fertilizers and Management
- Irrigation and Nitrogen Management
- Farm Practices and Nitrogen use Efficiency
- Nitrogen Management Plan
- Resources for Nitrogen Application and Management Practices
Grower Nitrogen Management Plan self-certification training

Trainer the Trainer
- Coordinated by CURES with support from CDFA/FREP
- CCA’s learn the curriculum and prepare to deliver it to growers
- 3 CCA training sessions in 2015
- 30 CCA’s attend
Grower Nitrogen Management Plan self-certification training

2015-16 Outcomes

- CURES coordinates training sessions with Ag Water Quality Coalitions
- 31 sessions held in 21 locations
- 1916 growers attend
- Curriculum continuously improved
Grower Nitrogen Management Plan self-certification training

2015-16 Outcomes

• Testing:
  • 70% correct answers to pass
  • Average score: 79%
  • Average pass rate across sessions: 82%
  • 19 retake sessions at Coalition offices

• Quality control
  • Test question responses analyzed
  • Post-session evaluation forms analyzed
Looking Forward from 2016

• 2016-17 Training season
• Possible changes to the Irrigated Lands Regulatory Program
2016-17 Training season

• Similar number of grower training sessions (~30?)
• Updated Curriculum and Study Guide
• Updated training for CCA trainers
• Additional CCA–Trainer recruitment
Possible changes to the Irrigated Lands Regulatory Program

- Irrigation reporting
- No vulnerability designation?
- Central Valley Certification needs
- Certifications Statewide
Nitrogen Management Training for Growers

The Team

CURES
Kara Stuart
Rivkah Cohen
Parry Klassen

University of California
Terry Prichard
Larry Schwankl
UC ANR CCA training committee

CDFA/FREP
Barzin Moradi
Doug West
Natalie Jacuzzi
Mark Cady
Questions?

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