Nutrient Management Planning at Dairies



Doug Patteson Dairy Program Manager Central Valley Water Board 28 August 2013

Slide 1

Dairy Operations

- Dairy General Order (Order No. R5-2007-0035)
- Three phases of operations:
 - Production area
 - Storage
 - Land application

Purpose and Expected Outcome

Apply nutrients efficiently
Maximize plant uptake
Minimize percolation and runoff
Protection of water quality

Nutrient Management Planning

Land Application Area
Sampling and Analysis
Nutrient Budget
Reporting

Land Application Area

- Map
- Fields
- Storage and conveyance
- Acreage and crops grown
- Sampling locations
- Third-party agreements

Sampling and Analysis

- Wastewater
- Manure
- Soil
- Plant tissue
- Irrigation water
- Groundwater

Nutrient Budget

- Crop need on a field scale
- Planned rate and timing of application
- Nitrogen Balance
 - 1.4 total N vs. N removed by crop
 - 1.65 if needed and no pollution
- Certified Nutrient Management Specialist



- Field inspections
- Nutrient monitoring
- Groundwater
- Nutrient Management Plan

Reporting Tools

Merced County reporting tool

File Edit View Favorites To	ate Data
😝 🍽 State Board Intranet 🧕	Region 5 Intranet 🚼 Google 🧉 CIWQS f Welcome To BizFlow 🔠 California State Controller
	California Central Valley Dairy Waste and Nutrient Management
	User Login
	Home Links Glossary What's New (05/09/13) Contact Loain
3 Login	
Enter your login and password b the registration e-mail. If you h create a new login at the R-CIS Login:	elow (sent to your e-mail address when you registered) to log into the system. The password must be entered using the same case that appears in are not yet registered, please visit the REGISTRATION PAGE. If you have already registered but need to prepare reports for another facility, please IRATION PAGE.
Password;	(core-sensitive)
Lugin	
B Lost password retrieval	
Only if you have lost your passy or lower case) as in the image.	ord, enter your login in the first box, and the text from the image into the second box. Any letters must be entered with the same case (upper-case
Login:	
PAO:	128
Image Text:	
Submit	
	Versee 5.0.1.0

Measures of Success

- Effective implementation of nutrient management
- Understanding impacts to water quality
- Water quality meets objectives or is improving

Benefits and Challenges

- Benefits:
 - Protection of water quality
 - Efficient use of resources
- Challenges:
 - Complicated
 - Requires commitment
 - Differing opinions
 - Tracking compliance at 1,300+ dairies

