Managing Agricultural Nitrogen

Workshop

Tulare, CA – June 18, 2012

Implementing Management Options

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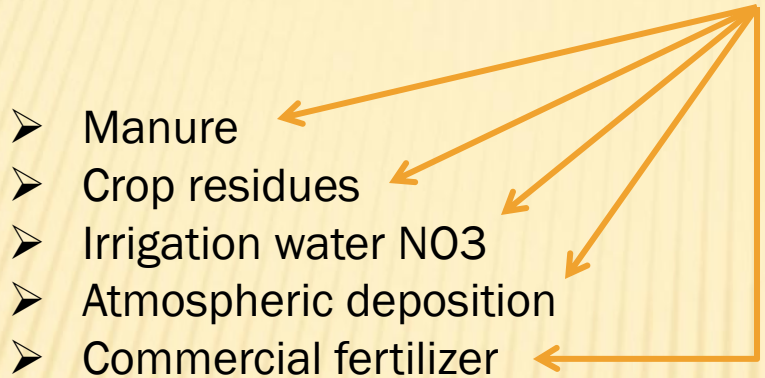
Presented by: Tibor Horvath CCA conservation agronomist

Fresno Area Office 559-252-2191 Ext. 103.

Comprehensive Nutrient Management Plans (CNMPs)

Balancing the Nitrogen applications from <u>all sources</u> to crop Nitrogen uptake



- Manure
- Crop residues
- Irrigation water NO3
- Atmospheric deposition
- Commercial fertilizer

Excess Nitrogen is exported off the farm

In fiscal year 2010 and 2011 NRCS developed or made payment for CNMP development to private planners on 158 farms totaling $782,061 and covering 118,500 acres of cropland in the Central Valley through the Environmental Quality Incentives Program (EQIP)

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Most Common Conservation Practices to Implement CNMPs:

634 Waste transfer – pipelines and flow meters to transfer liquid manure to additional crop fields

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632 Manure separators – screen separators and settling basins

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In fiscal year 2011 NRCS cost shared ***634 Waste transfer*** and ***632 Manure separator*** practices on 41 farms in the amount of $2,806,235 affecting 8, 253 acres of cropland in the Central Valley through the EQIP program.

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340 Cover crop practice

Cover crops will scavenge residual Nitrogen available in the soil profile between main crops and prevent N-leaching.

In fiscal year 2011 NRCS cost shared ***340 Cover crop*** practices on 17 farms in the amount of $307,120 affecting 718 acres of cropland in the Central Valley through the EQIP program.

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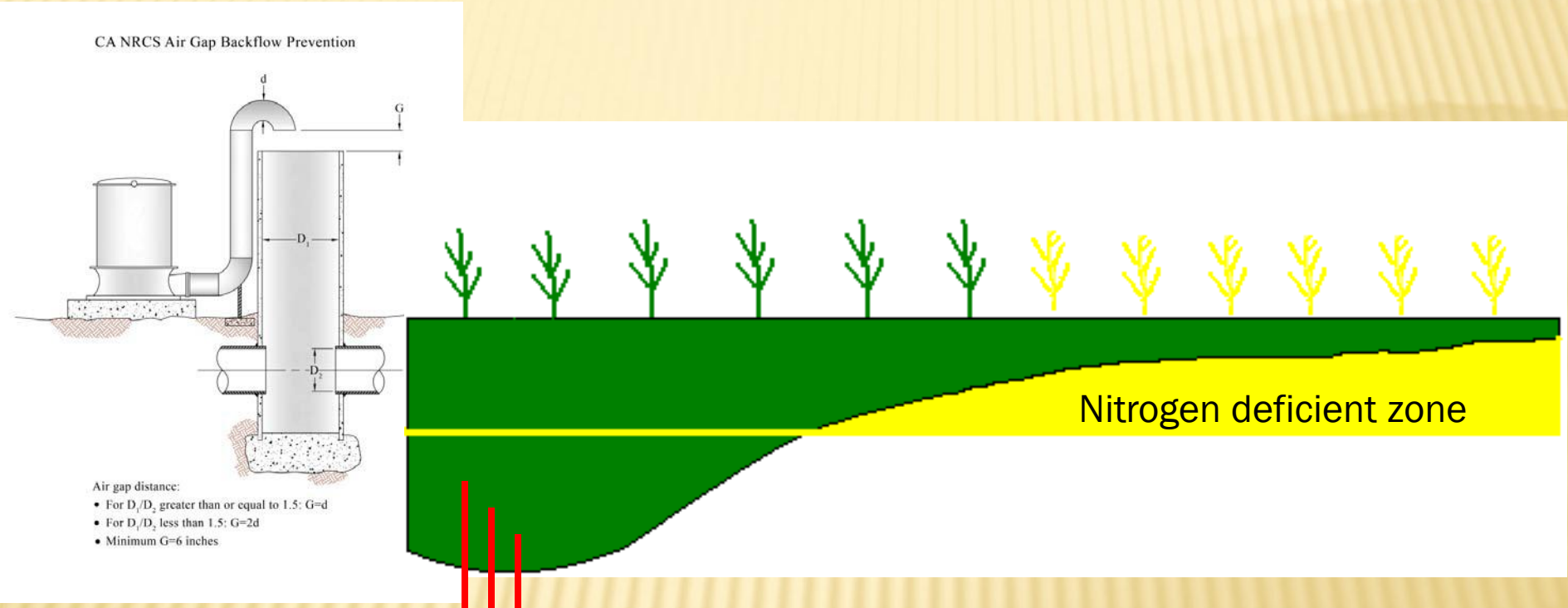
Distribution of Nitrogen on a field from waste water flood irrigation



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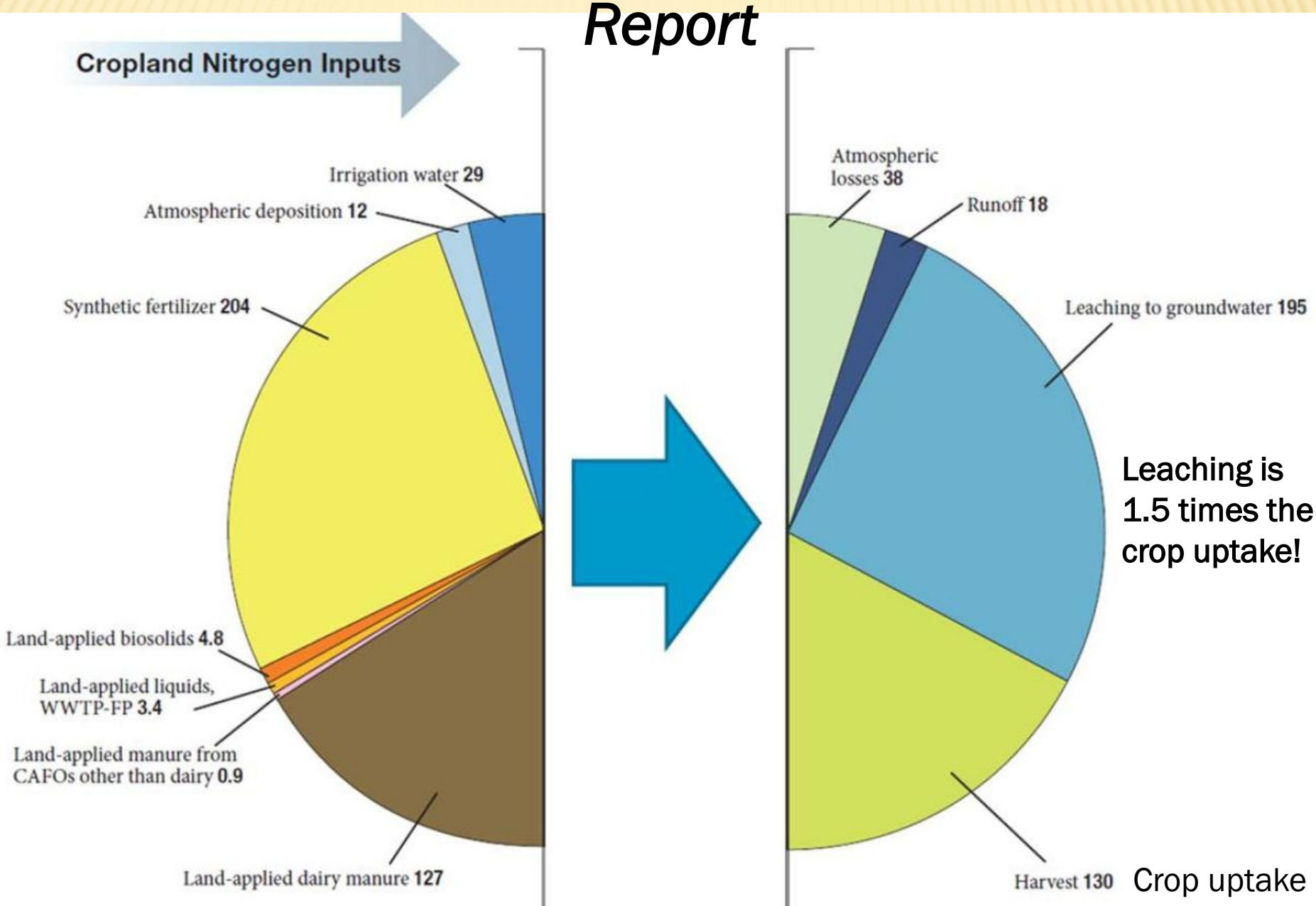
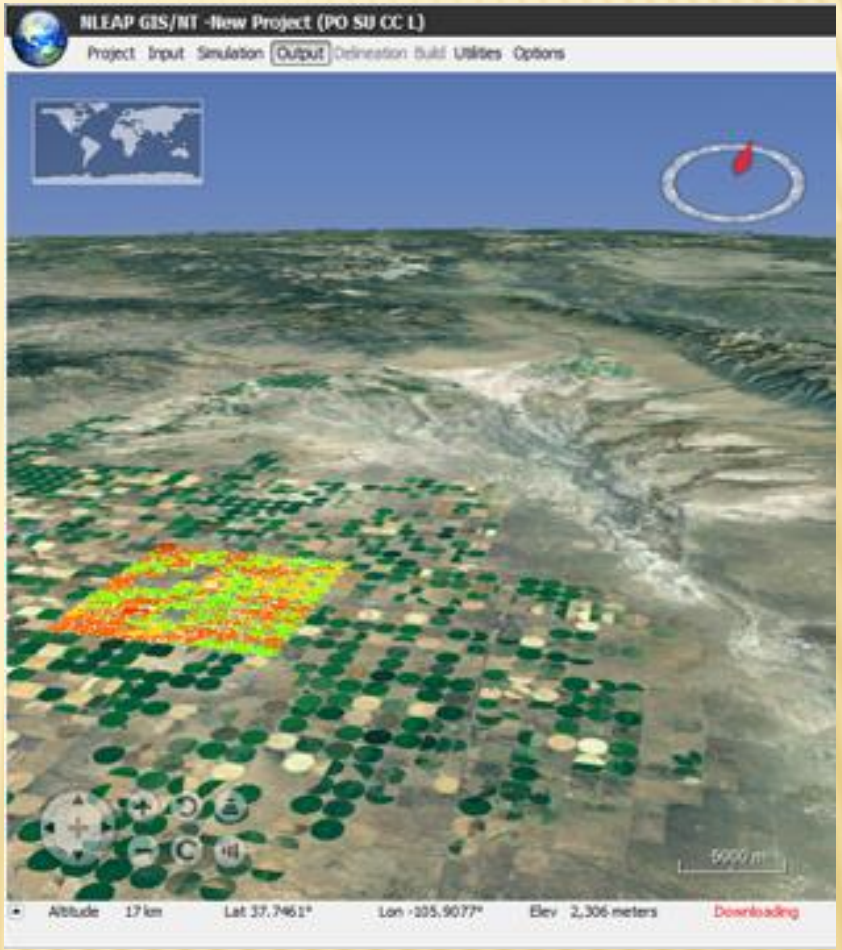
Tom Harter's *Nitrate in California's Groundwater Report*



Leaching is 1.5 times the crop uptake!

Crop uptake

New Assessment Tool: Nitrogen Index



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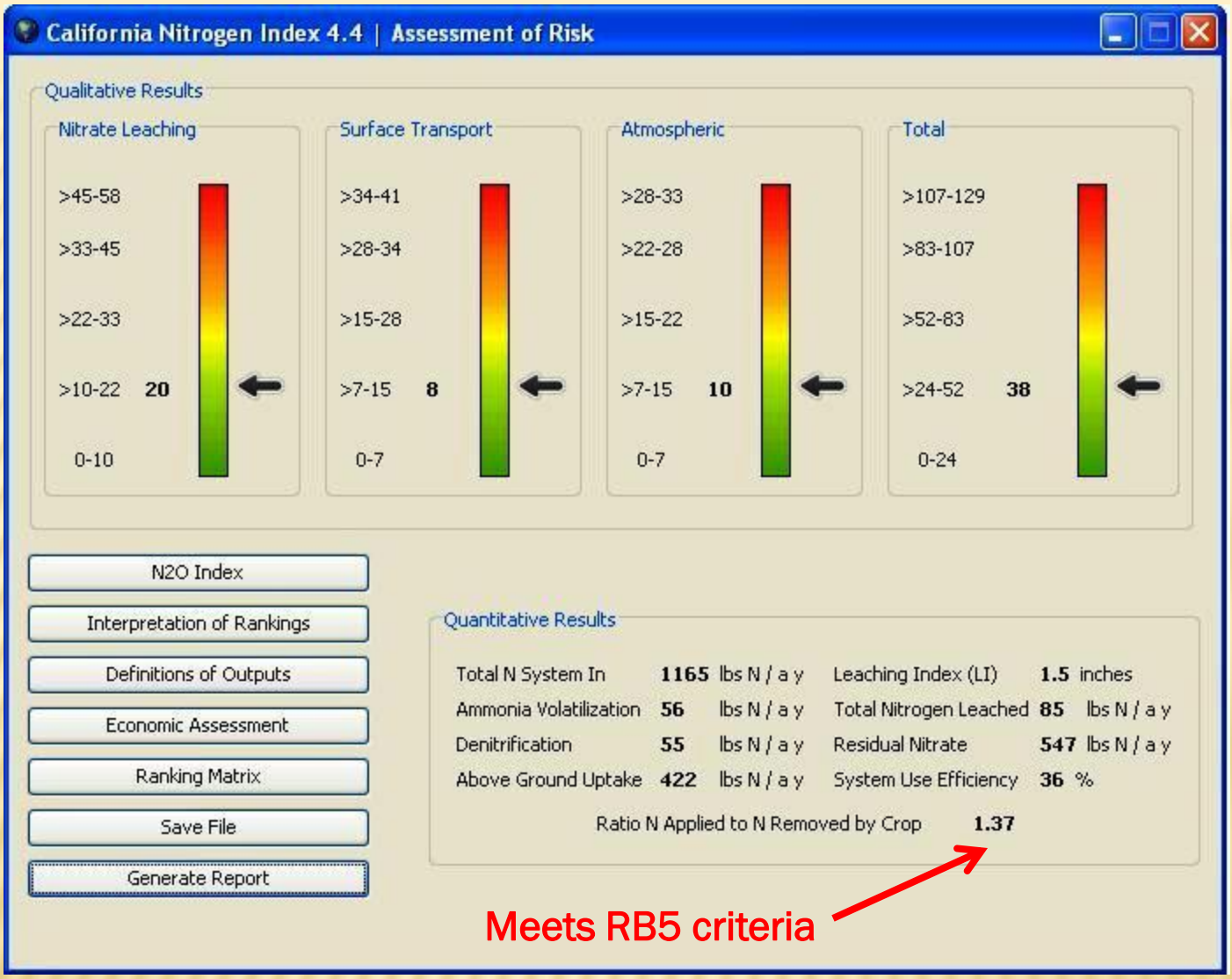

A dairy nutrient management plan example for the use of the N-Index. Example farm is in compliance with RB5 rules, but still losing 85 lbs of Nitrogen per acre per year through leaching.
The soil is Hydrologic group A with high infiltration rate. The dairy waste water is applied using flood irrigation method.

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