



**IDA**  
IDAHO  
dairymen's association

**Tools & Metrics for Carbon  
Neutrality on Western Dairies**  
Rick Naerebout | CEO

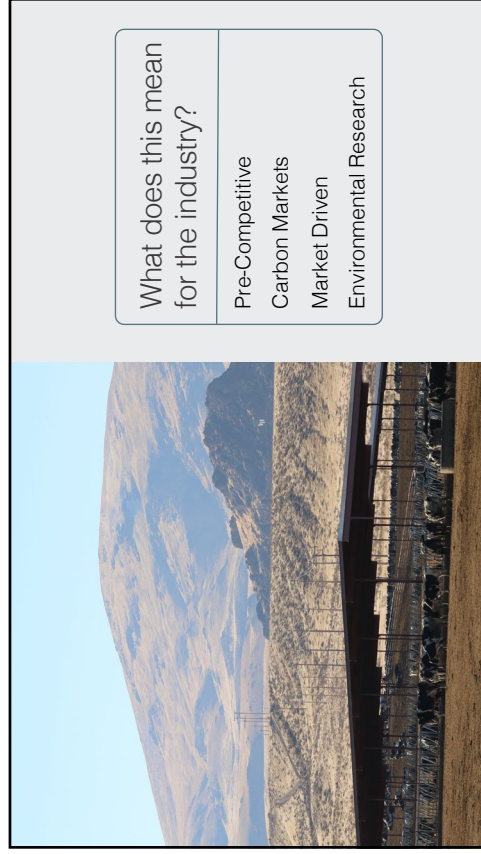
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**US Dairy's 2050  
Net Zero Commitments**

- Achieve GHG neutrality
- Optimize water use efficiency
- Improve water quality

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**What does this mean  
for the industry?**

- Pre-Competitive
- Carbon Markets
- Market Driven
- Environmental Research

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2015 - 2021

**Global Warming  
Potential Study**

**On-farm measurement of greenhouse gas  
emissions in Idaho & California**

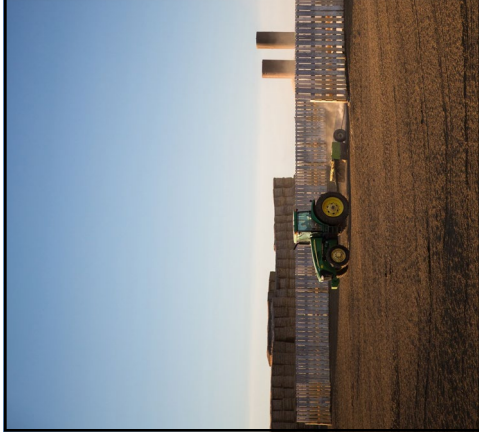
**Measured & estimated totals of**

- CH<sub>4</sub>
- N<sub>2</sub>O
- NH<sub>3</sub>

**Evaluated emissions from all areas of the farm**

**Data used to calibrate national models  
estimating GHG**

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2021 - 2023

## Manure Methane Potential Study

- Updating methane estimates & developing strategies for mitigation of manure emissions
- Measuring total methane produced in all types of manures
- Identifying areas of impact & mitigation practices
- Update national emissions models

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2012 - 2024

## Automated GHG Chamber Study

- Measuring greenhouse gas emissions from fields with fertilizer & manure applied
- Continuous measurements taken each season to generate flux estimates
  - Evaluating field management practices' effect on emissions
  - Gaging carbon sequestration potential based on emissions
- Update national N2O models

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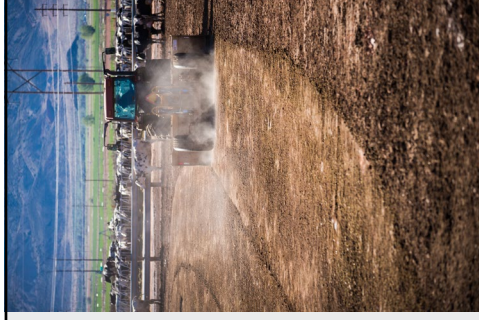


2021 - 2026

## NZI FFAR Grant USDA-ARS Kimberly, ID

- Improving on-farm sustainability through soil health & manure management
- Measuring soil health & carbon sequestration
- 5 participating locations across the US
  - Large plots
  - Strip tillage + cover crops
  - Sedron & DAF solids applied to manured and non-manured soils
  - 4 years of corn into 1 year alfalfa

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## Pacific Northwest Partnership

- Participants from ID, OR, UT, & WA
  - Check-off & policy organizations
  - Processor and co-op representation
- Share information
- Catalyze research that will help the PNW dairy industry lead on sustainability

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