Development of Acceptable Ranges of A/R

ILRP Stakeholder Meeting

January 31st, 2024

Topics

- ILRP Requirements
- Acceptable Ranges of A/R versus Groundwater Protection Targets
- Draft workplan overview
- Next steps

ILRP Requirements

- A/R Acceptable Ranges are an objective under the Management Practices Evaluation Program (MPEP)
- Coalitions must determine “acceptable ranges” for the **multi-year** A/R ratios by **crop**
- Room for future refinements pending new research, technologies, crop varieties, etc.

A/R Ranges versus GWP Targets

Attribute	Acceptable Ranges of A/R	GWP Targets
Mathematical Unit	Unitless ratio	Average pounds per acre
Spatial Scale	Individual grower/parcel	Township
Where the metric applies	Entire Central Valley, areas with high and low vulnerability	GWP Townships identified based upon high vulnerability
Crop-specific?	Yes	No, all crops are aggregated
Directly quantify impacts to water quality?	No	Yes

Workplan Components

Proposed definitions for each end of the range:

- **Lower end (smaller A/R ratios)** – Reflects the lowest A/R ratios that are expected to be routinely achievable under optimal growing and market conditions; a theoretical efficiency for growers to target. This end of the range may shift over time as new data and information are generated through continued scientific research.

- **Upper end (larger A/R ratios)** – Reflects the variety of real-world conditions across the Central Valley as reported by growers. This distribution is expected to shift over time as the landscape evolves through the use of new varieties, technologies, and management practices.

Workplan Components

Background on:

- Nitrogen efficiency metrics and those used in the ILRP (i.e., A/R and A-R)
- Crop-specific considerations and why N removed (“R”) differs across crop type
- Why different crops will intrinsically have different Acceptable Ranges of A/R
- Available data to develop Acceptable Ranges of A/R
  - Scientific literature and extension materials
  - N removal coefficients
  - Multiple years of grower-reported Irrigation and Nitrogen Management Plan Summary Reports

Workplan Components

Data and methods:

- Scientific literature and extension materials inform the lower end
- Analysis of recent grower-reported INMP data to inform the upper end
- Note about N removal coefficient updates for specific commodities

Schedule and next steps