

Frequently Asked Questions (FAQs)

FAQ 1. What should I do if my reported information in Section 3 is incorrect?

If the data in Section 3 does not accurately reflect the information submitted to the Coalition on your INMP Summary Report, please contact the Coalition to update your information.

FAQ 2. What will you do with my nitrogen use information?

The Coalition collects your reported A/R ratios each year. This information is evaluated and summarized in a report to the Regional Water Board, in compliance with the Irrigated Lands Regulatory Program (ILRP). The report includes an evaluation of outliers, most recent crop year summary statistics, and trends in nitrogen applied, A/R ratios, and A-R values; NOT included in the report are member names, addresses, and other personal information

FAQ 3. What is “R” and how is that number determined?

“R” (nitrogen removed) is an estimate of how much nitrogen is removed from the field at harvest. A crop-specific nitrogen coefficient is based on available literature and studies that determine the amount of nitrogen removed per pound of yield. For each crop with an available crop-specific nitrogen removed coefficient, the Coalition multiplies yield (pounds/acre) by the coefficient (nitrogen removed/pound) to determine the amount of nitrogen removed per acre or “R”. For some Central Valley crops, coefficients are in development or being further refined, and are subject to change.

FAQ 4. What is an outlier?

The Coalition determines outliers based on a statistical calculation (medcouple Interquartile Range) of the most recent 3 years of A/R data for each crop. The method was decided upon as the best approach for the ESJWQC because it can be used across a wide range of sample sizes, data distributions, and accounts for skewness in the data. Accounting for skewness is important for crops that have only a few fields or management units reported.

FAQ 5. Will the Regional Water Board take action against members with outlier management units?

The Coalition evaluates data reported over three years and works with growers to better understand reasons for high A/R ratios such as seasonal variability of production, unexpected low yields and weather conditions. After being notified by the Coalition that a field or parcel is an outlier, the Regional Board allows members three years to improve their A/R ratios. If ratios have not improved after three years, the Regional Board may take action to address the problem. However, the Coalition will continue to work with members to improve their A/R ratios and provide feedback so growers can make informed decisions about their nitrogen fertilizer management.

FAQ 6. What does my field A/R mean?

A/R (Applied divided by Removed) represents how efficient your nitrogen use is in a particular field or management unit. The lower the number, the more efficient your nitrogen usage, and the lower the likelihood that excess nitrogen is leaching into groundwater.

FAQ 7. What is a ‘good’ A/R?

Currently there are no target A/R values. This is because not only is more information needed to know the optimal range for each crop type, but the A/R value is a simplified way of looking at nitrogen usage by a crop. A/R is not always reflective of the actual conditions in the field. There are many factors that can contribute to nitrogen efficiency that are not captured by the A/R value. Generally, the lower the A/R, the more efficient a grower is in managing their nitrogen applications (less applied and more harvested yield). An A/R value of 1 means the same amount of nitrogen applied is removed from the field (or for trees and vines, N harvested plus stored in permanent tissue).

FAQ 8. How can I improve my A/R ratio?

Notwithstanding abnormal crop scenarios (frost damage, insect infestations, etc.), an A/R value can be improved by reducing the amount of nitrogen applied and maintaining crop yields, or by increasing yields at the same nitrogen application rate through more efficient nitrogen management practices.

FAQ 9. What is the difference between A/Y and A/R?

Since R is calculated using Y ($A/R = (\frac{\text{Applied}}{\text{Yield} \times \text{N-Coefficient}})$), the distributions for evaluating outliers are similar.

However, since R is calculated using a crop-specific nitrogen coefficient the values are more comparable across crop types with vastly different yields. For some crops, crop-specific nitrogen coefficients are still being developed and refined.

FAQ 10. What does 'A-R' tell me?

The 'A-R' value reported in Section 3 is a difference of how much nitrogen was applied versus the estimated amount that was removed at harvest (based on yield). If the A-R value is positive, there may be nitrogen applied to the field that was not removed at harvest or used by the plant. The A-R calculation is the best estimate of the amount of nitrogen that could leach to groundwater. It is recognized that there may be field specific variability that would result in either more or less nitrogen being used by the crop than estimated with A-R.

FAQ 11. How can I learn more?

There are many resources available to growers on fertilizer guidelines and recommendations. Good places to start are either your commodity organization or the California Department of Food and Agriculture (CDFA) Fertilizer Research and Education (FREP) program (<https://www.cdfa.ca.gov/is/ffldrs/frep/index.html>) and the UC Cooperative Extension (<http://ucanr.edu>).