

# NIR or Chemistry: Choosing the Most Appropriate Testing Method

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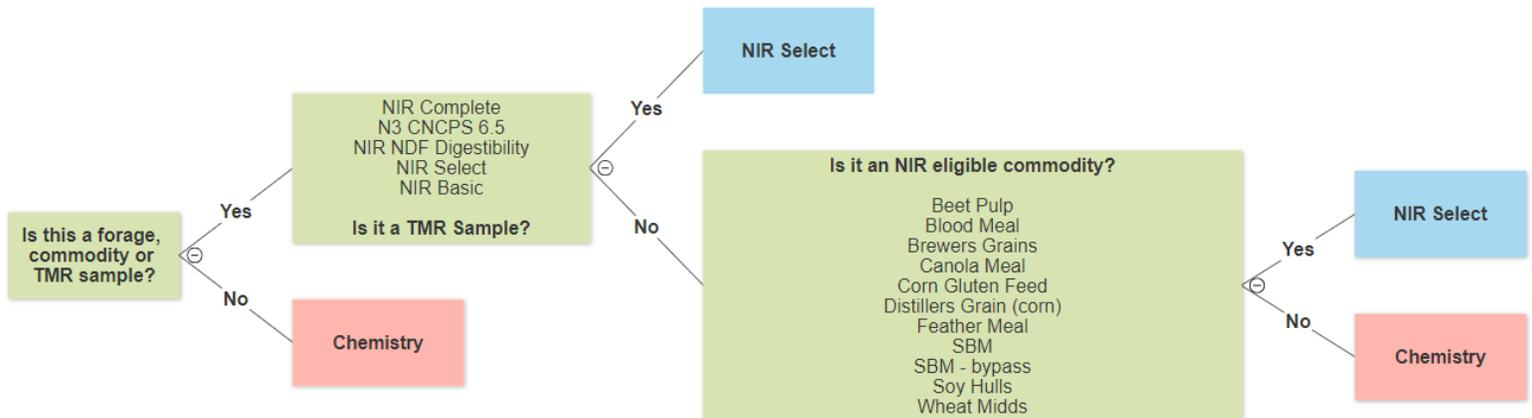
Selecting the most appropriate analysis on a sample can be challenging when faced with many NIR and chemistry options. While chemistry will always be the gold standard of nutrient analysis, NIR is a secondary method which is very repeatable and economical. Dairyland offers a broad range of NIR and chemistry testing services for feed, forage, and manure samples and each product type has its own set of testing procedures and methodology.

In some cases, samples that may be eligible for NIR analysis may not be appropriate for that type of analysis. Samples that are extremely high in ash, treated with urea, treated with molasses, or an unusual species would not be appropriate for NIR analysis. Analyzing TMR's by NIR should also be done with caution and protein from urea and sugar in the form of lactose may not be accurately estimated by NIR. In addition, the reference method for ether extract (fat) may not accurately characterize total fat when the TMR contains calcium salts. Dairyland's staff is always available to talk through the suitability of NIR for particular applications.

## Enhancing Your NIR Analysis with Chemistry Mineral Analysis

While NIR can estimate mineral content of a sample, minerals don't directly absorb infrared light, so NIR's accuracy is limited to finding general relationships minerals and other nutrients like protein and ash. If there are potential mineral issues with diet, or the diet is being formulated for DCAD balance, we recommend chemistry mineral analysis. The primary reason Dairyland does not report sodium or chloride by NIR is that we feel NIR minerals are not accurate enough for effective DCAD ration balancing. Dairyland utilizes AOAC approved methods for mineral analysis.

Our recently launched [Sample Management Center](#) helps in addressing package selection as it automatically filters available testing packages based on the product type you choose when submitting each sample. The submittal page will also recommend the most applicable packages for each sample type.



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