



Resources for Sampling and Evaluating Forages and Total Mixed Rations (TMR)

Certified Feed Management Planners

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Documentation that the producer is correctly implementing the paper ration is an important component of a feed management plan. For herds feeding a total mixed ration, accurate sampling is important so a fair comparison can be made against the formulated ration. Below are some guidelines for sampling a TMR and additional resources on sampling forages and using the Penn State particle separator to evaluate the TMR and refusals.

- 1. Sampling a total mixed ration:
- The TMR is mixed as per normal procedures.
- Sample the TMR immediately after distribution to the cows (within 20 minutes).
- Fill a 5-gallon bucket with handfuls of TMR from the top, middle, and bottom from the entire length of the TMR windrow.
- Empty the 5-gallon bucket on a large clean surface.
- Thoroughly mix the sample together.
- Take grab samples from the top, middle and bottom to fill a gallon size zip-lock bag.
- 2. Forage Quality Testing: Why, How and When Agronomy Facts 44. The fact sheet describes how to best sample dry hay and silage.

http://cropsoil.psu.edu/extension/facts/agfact44.pdf

3. Evaluating the particle size of the fresh TMR and the refusals can indicate if sorting is an issue and may explain discrepancies in the TMR analysis, especially if sampling does not occur soon after feeding. The following web site has information on using the Penn State particle separator. http://www.das.psu.edu/das/dairy/dairy-nutrition/forages/tmr