



Evaluating Feeding Technician performance

by **Fernando Diaz (DVM, PhD)**

Since feed is the highest individual cost in intensive dairy production systems, the Feeding Technician is one of the most important job positions at the dairy.

According to the USDA Economic Research Service (2018), during the last decade feed costs represented in the US between 42 and 57% of the total cost of producing milk. At current feed costs of \$0.24 per kg of dry matter (DM), the average budget of a 500-cow dairy exceeds one million dollars.

One of the areas of focus for improving income over feed costs is ingredient loading accuracy. Researchers from Virginia Tech demonstrated that 4% of all total mixed ration (TMR) loads were underfed by more than 180kg in nine dairy farms located in the Chesapeake Bay (James and Cox, 2008). On the other hand, frequency of overfeeding in excess of 180kg was 33%.



Similarly, researchers from California (Trillo et al., 2016) evaluated dairy feeder performance based on loading deviations from target weight. The study included 26 dairies that ranged in size from 1,100 to 6,900 cows. Feeding records included information from more than 500,000 ingredient loads and were obtained throughout a 12-month period from the feeding software.

In summary:

- In 2.5% of the total loads, ingredients were loaded under the target weight set by the tolerance level, representing between 0.1 to 21.1% loads of feed per dairy.
- When expressed in kg, at least 20% of the time ingredients were loaded with a deviation from target >35kg on seven dairies or <-35kg on two dairies.
- Rolled corn and almond hulls were loaded with adequate precision and adequate accuracy, while alfalfa hay, corn silage, and canola were loaded with poor precision.
- As result of deviations from the target weight, the ration cost increased by at least \$3 per metric ton <5% (15 dairies), 5 to 20% (six dairies), or >20% (two dairies) of the time.

These findings show that while some dairies are doing an excellent job for loading the mixer on their operations, others must improve loading accuracy and precision considerably.

In conclusion, high-producing herds require a high level of feeding management to assure the supply of a consistent diet.

Recommendation for loading accuracy:

- Ingredients from upright bins: less than 15kg fresh matter (FM).
- Ingredients from open-sided commodity sheds: less than 20kg FM.
- Dry hay: less than 25kg FM.
- Silages and wet corn co-products (30-60% DM): less than 50 FM.