C-LOCK INC.

Measure, Monitor, Improve

Procedure for Feed Measuring Percent Dry Matter

Accurately measuring percent dry matter (DM) for your feed is critical to determine individual animal dry matter intake using SmartFeed and SmartFeed Pro. This DM% is applied to the amount of as-fed feed consumed to calculate dry matter intake (DMI). This should be done before beginning your feeding trial. When ration ingredients or the type of feed is changed, this procedure should be repeated.

Materials Needed:

- Sample of Total Mixed Ration (TMR) of feed being used
- Weighing scale (accurate to at least 0.1 grams)
- Aluminum pans or heat safe sample containers
- Drying oven (set at 60–65°C) or air fryer or microwave oven
- Tongs or heat-resistant gloves
- Calculator or spreadsheet software

Procedure:

1. **Sample Collection:**
   - Collect a representative sample of the TMR from different parts of the feed bunk to ensure uniformity.
2. **Initial Weighing (Wet Weight):**
   - Place an empty, clean aluminum pan on the scale and tare (zero) the scale.
   - Add approximately 200-300 grams of the TMR sample into the pan.
   - Record the weight as the "Wet Weight" (WW).
3. **Drying the Sample:**
   - **Using a Drying Oven:** Place the sample in the oven at 60–65°C for 48 hours.
   - **Using a Microwave:** Don't use metal pans if you use the microwave method! Place the sample in the microwave, heat on medium power in short intervals (2-3 minutes), stirring between intervals to prevent scorching. Continue until the sample reaches a constant weight.
   - **Using an air fryer:** Preheat to 60–70°C. Place the sample in the air fryer. Set a timer for 10 to 15 minutes stirring occasionally. Continue until the sample reaches a constant weight.
4. **Final Weighing (Dry Weight):**
   - Ensure the sample has cooled completely.
   - Weigh the dried sample and record this as the "Dry Weight" (DW).
5. **Calculating Percent Dry Matter:**
   - Percent Dry Matter (%) = (Dry Weight / Wet Weight) × 100

Example Calculation:

WW = 250 g and DW = 150 g

Percent Dry Matter = (150 / 250) × 100 = 60%