What is Dry Matter?

Why do I need to measure it?

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Outline

• What is Dry Matter (DM)?
• When is DM important?
• Why is DM important?
• Determining DM
DM is what remains when water (moisture) is removed from a feed.

- Example: In the corn silage report, DM = 36%
- For every 100 pounds of silage fed, 64 pounds of that is water.
When is DM important?

» Buying/selling forages
» Comparing feedstuffs
» Formulating rations
» Ration mixing/feeding
Why is DM important?

Water does not contain energy and energy intake is essential for milk production.
Let’s look at an example:

Your nutritionist formulates a ration that calls for 6,000 lbs of corn silage to be added to the mixer wagon.

The last DM shows the corn is @ 35% DM (or 65% Moisture)

How many lbs of DM is that?

6,000 lbs x 0.35 = 2,100 lbs DM
Why is DM important?

What if the DM is actually 30% DM?

6,000 lbs x 0.30 = 1,800 lbs DM

We’ve cheated the ration of 300 lbs of corn silage.

At 30% DM, the amount of silage going into the mixer wagon should have been:

2,100 lbs DM ÷ 0.30 DM = 7,000 lbs of corn silage
How often do you check DM?

Wet feedstuffs, such as silage, are more likely to fluctuate in DM.

Audience Poll:
How often are you checking DM of your corn silage?
Weekly?
Every other week?
Monthly?
Less than that?
How often do you check DM?

In a 2013 California survey, DM was determined:

• 1 to 3 times **per week** (27.9%),
• 1 to 3 times **per month** (57.8%), and
• 1 to 6 times **per year** (14.3%).
How do you check DM?

2013 Survey Results:
49.3% checked DM on-farm.
50.7% sent samples to a lab.

On-farm DM evaluations were done using:
» koster tester (76.4%),
» microwave (20.6%) and
» a food dehydrator (3.0%).
How is DM determined in the lab?

OVEN DM

**Advantage:** standard method

**Disadvantage:** cost (shipping) & turn around time
How is DM determined on farm?

**KOSTER TESTER**

**Advantage:** time, cost, “set and forget”

**Disadvantage:** equipment/user errors
How is DM determined on farm?

**MICROWAVE**

**Advantage:** turn-around time, cost

**Disadvantage:** requires constant monitoring
How is DM determined on farm?

PORTABLE NIR

Advantage: instant feedback
Disadvantage: cost
Troubleshooting Tips

What if a result doesn’t make sense?

• Do you have a good sample?
Do you have a good sample?

• Is your sample representative of what you’ll be feeding?
Do you have a good sample?

- Is your sample representative of what you’ll be feeding?

- How was your sample handled?
Troubleshooting Tips

What if a result doesn’t make sense?

• Do you have a good sample?

• Is your scale working properly?
Troubleshooting Tips

What if a result doesn’t make sense?

• Do you have a good sample?

• Is your scale working properly?

• When in doubt – compare!

• Train, train and re-train!
Questions?
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