

TABLE 1 2018 ensiled forage matrix

Questions to ask:

What happened?

Growing season conditions		Harvest conditions	
Dry	Wet	Dry	Wet
Lower yield and poor ear fill, leaf loss	Rapid growth and maturity, (soil) microbial contamination and disease pressure	Low moisture level, leaf loss, microbial (dust) contamination	Leached crop, advanced dry matter level and maturity possible in the crop (due to weather preventing harvest), high nitrate levels (if after a drought period)

How could the silage fermentation* be impacted?

*Assuming a natural/wild fermentation, without any forage inoculants

Typically difficult to pack, a high temperature during active fermentation	An undesirable fermentation profile, with a slow pH drop and presence of unwanted metabolites	Typically difficult to pack, a high temperature during active fermentation	Low level of sugars leads to a curtailed fermentation; very likely to have a clostridial fermentation. Runoff and seepage will most likely be present
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When reviewing silage analysis results, where should our focus be?

Starch levels (corn), protein fractions, yeast and mold counts, mold identification	Organic acids, protein fractions, yeast and mold counts, mold identification	Ash levels, bound protein (ADI-CP), yeast and mold counts	Starch-D (corn), butyric acid, ammonia-N and pH (haylages)
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How can this negatively affect the cow's diet and performance?

Monitor for mycotoxins. Potentially higher levels of aflatoxin and fumonisins could be present	Commonly find poor starch digestibility, and potential for T-2, vomitoxin and zearalenone to be present	Monitor for mycotoxins. Some that could be exceptionally high are: ochratoxin A, aflatoxin, patulin and PR toxin	Add new silage slowly to the diet. Clostridial silages: feed <50 g butyric acid/cow/day, and nothing to transition cows
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