



by John Goeser

# Which entrée would you rather have?

IMAGINE just being seated for dinner at a new and highly regarded steakhouse. Within minutes, you begin listening to the waiter describe the chef's specials for the evening.

The waiter leads the narrative by describing the first special, an Angus beef prime bone-in rib-eye with an amazing complement of asparagus, mushrooms, salad, and potato. Then the server proceeds with the second special, describing a locally caught wall-eye fillet that has been seared and crusted with the chef's secret blend of spice and butter, and coupled with a fresh vegetable medley and over a bed of rice.

You might have guessed that these are two of my favorite entrées. Both of these options seem delicious and can meet the need at hand — satiating the patron's hunger.

In learning the menu options, your hunger may be coming on full steam just like your high-producing dairy cows when the ration is delivered to the bunk. In your high-cow ration, various ingredients are blended according to the balanced diet provided by the nutritionist.

In many rations today, the main course is corn silage, and it comprises one-third of the diet or even

more. Considering and deciding upon one of two corn silage options can be thought of in a very similar fashion relative to the two chef's specials.

## In the farm "kitchen"

Corn silage is a unique feed, being a blend of grain and stover. Seed companies and plant breeding programs can biannually refine their seed genetics specific to dairy or beef rations with two breeding seasons each year, one in both Northern and Southern growing climates.

The advance can be rapid when adequate resources are allocated to choosing silage inbreds and genetics. Breeders tend to focus on the grain and stover, selecting for different attributes relative to their organizational goals.

For dairies and feed yards, evaluating the seed genetic choices or simply comparing the silage crop relative to last year, we're often presented with forage analyses to help aid us in silage evaluation. In my nutrition support and advisory role, discussions routinely hinge on comparing and contrasting two silage options at hand, just like is the case with entrées at the restaurant.

There's been a common thread to the discussion when working with dairies, allied industry professionals, agronomists, and seed companies over the past two years. The question includes something to the effect, "Is greater neutral detergent fiber (NDF) digestibility worth it if there are other drawbacks?"

The answer is, "It depends."

This is not an academic response but rather an experienced answer. Every farm is different, so the right

silage quality and goals follow suit. For the purpose of this discussion, we'll compare and contrast two corn silage options and nutrition analyses as laid out in the table.

The two silages in the table could represent a couple of options from your on-farm replicated trial. They could be this year's silage relative to last year's silage, or they may be a couple of options available from two seed companies. A word of caution as we wade into this, make sure you have some replication behind your silage analysis in situations like this. It's important to use silage sample averages. Do not make expensive decisions based on just one or two sample results.

## Making the choice

In the table, you'll notice that Silage B in excels in fiber digestibility as the total tract NDF digestibility (TTNDFD, % of NDF) is roughly 10% greater and the undigestible NDF is around 15% less than Silage A. To some, the discussion stops here and silage B wins out due to fiber digestibility. If all else in the nutrition analyses falls out equally, then better fiber digestibility equates to more energy per pound.

However, this decision may not be the right one. In this case, Silage B carries slightly less grain and starch than does Silage A.

Remember, silage is a blend of grain and stover. If improved fiber digestibility is matched up with less grain and starch, then the total digestible nutrient (TDN) level may be less than ideal.

Here, Silage A and Silage B are equivalent in energy value per

pound. The equivalent TDN is because Silage A brings more grain and starch than does Silage B, and starch and grain digestibility is typically around 90% to 95%, whereas fiber digestibility is around 45%.

Remember, cows are able to unlock twice the calories from every pound of starch relative to what they can unlock from a pound of fiber. This makes the decision a bit harder in deciding which is the better option. This is just like the task at hand when the chef presents two exceptional specials to choose from.

## Buy the starch?

Back to silage, some experts may argue that digestible fiber is a critical asset to corn silage, and corn grain can be bought to supplement. Having spent much of my career working with fiber digestibility, I agree that fiber digestion is a pivotal factor in dairy nutrition.

But with expensive corn grain, and a desire to capture as many calories per pound as we can, a situation like that presented in the table below warrants a team discussion and budget projections. Take this conversation up with your advisory team as you evaluate your silage options for the next growing season. 🐄

Two corn silage nutrition analyses		
	Silage A	Silage B
Dry matter, %	35.0	35.0
Protein, %	7.5	7.5
aNDF, %	40.0	42.0
Starch, %	34.0	32.0
uNDF240, %	10.0	8.5
TTNDFD, % NDF	45.0	49.0

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