

# Checkpoints for High Corn Silage Diets

DIBS 46-24

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Feeding diets with high levels of greater corn silage can reduce feed costs and increase short-term cash flow, especially if its highly digestible and replacing less digestible feeds. The following checkpoints are important items to pay attention to when increasing corn silage in a diet for lactating dairy cattle.

1) Check your silage inventory! It seems obvious, but it is important to check your inventory before making any large diet changes. Preferably, make sure you have enough forage to allow the new crop to ferment for  $\geq 6$  weeks to ensure high quality, stable corn silage.

2) Select a corn silage hybrid with high fiber digestibility. This does two things when feeding more corn silage. First, high fiber digestibility increases the amount of energy that cattle will obtain from the silage. Second, it will increase the amount of feed cows can eat. When feeding high-forage diets, fiber can limit feed intake, but highly digestible forages reduce this risk. Feeding brown midrib (BMR) corn silage hybrids will offer the greatest fiber digestibility, but they may have lower yields than conventional hybrids.

3) Monitor diet forage fiber (fNDF) concentration. When increasing forage, you will also increase the fNDF in the diet. Increasing fNDF can help maintain a healthy rumen environment, but it also may reduce feed intake by slowing passage rate and increasing gut fill. For corn silage with average digestibility, keep fNDF concentrations at or below 24% of diet DM; otherwise, you'll be at risk of reducing feed intake. Low fNDF diets also can increase risk for low rumen pH.

4) Effectively process the forage. Feed intake is not only constrained by fNDF, it also may be constrained by forage particle size. When feeding additional forage, make sure the forages are processed well and particle size of the diet is optimized. Diet particle distributions should be 2-5% of particles retained on a 19 mm sieve and  $>50\%$  retained on an 8 mm sieve (Grant and Cotanch, 2023).

5) Monitor diet unsaturated fatty acid concentrations. This may seem like a random consideration, but it's an important one. Corn silage has about 2.5% of dry matter as fatty acids, but about half of those fatty acids are linoleic acid. Linoleic acid is important because it increases the risk for milk fat depression. It is especially important to monitor linoleic acid when corn is the primary grain in the diet. When increasing corn silage in the diet, reformulate the ration in such a way that you're not feeding excess unsaturated fatty acids.



Bottom Line:

Feeding greater corn silage in a dairy cow diet may be a good option to improve your short-term (and long term) financial situation, and if the silage is high quality, it may also maintain or increase milk production. In any scenario, make sure to consider these 5 checkpoints to get the most out of your corn silage.

Reference:

Grant, R. J. and K. W. Cotanch. 2023. Perspective and Commentary: Chewing behavior of dairy cows: Practical perspectives on forage fiber and the management environment. *Applied Animal Science* 39(3):146-155. <https://doi.org/10.15232/aas.2022-02371>

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