

Early corn silage chopping: Good or bad?

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Nobody would argue that corn is not a highly versatile and valuable crop. Just ask any FFA member, and they will tell you that it grows in all 50 states. A large percentage of it lies in the Midwest, but because of its wide range of uses, high demand and flexibility, corn is grown in a large spectrum of soil types and climates.

The number one use for corn is feed for livestock and can be found in several forms and storage methods. Whole plant harvest, combined wet and dry, and grazed before and after grain harvesting, give livestock farms a laundry list of options of what to do with their planted crop.

Corn silage, specifically, is reserved for cattle farms and a portion of sheep and goats and has proven to be a top-quality feed for these animals. Although corn silage is replaceable, it is hard to beat with a great combination of highly digestible fiber and energy in one package that animals love to eat.

Harvesting optimal corn silage does not happen easily. A lot is invested in the land, seed, fertilizer, machinery, storage, time and more. Weather also plays a significant role in growing high-quality corn silage, even with proper investments. Nonetheless, we have set targets that indicate it is time to start chopping. Whole plant moisture from 65–68% is ideal, with a theoretical chop length of three-quarters of an inch. Historically, the milk line on the kernel has been a quick way of evaluating plant maturity and suggesting it was time to chop at half of the milk line. With a low correlation to whole plant maturity, this method has recently become more of a guideline. Today, other approaches, such as Growing Degree Days (GDUs), are also used in conjunction with specific hybrids and locations to track harvesting and plant growth.

Plans, especially those revolving around weather, tend to change. Although last year's harvest was well-planned, inventories can run low from excessive shrink or loss, or maybe animal numbers were higher than anticipated. Drought can put stress on current inventory and even more uncertainty in the growing crops. A significant weather event, such as a drought or lack of feed, tends to push harvest ahead of schedule. What are the advantages and disadvantages of chopping early?

Advantages of chopping early

Most of us do not choose to harvest a crop before it is ready but rather out of necessity. Here are some highlights from what is usually a difficult situation:

- 1. You have feed for the animals: Although some benefits are waivered on quality and quantity, at least there is feed available.
- 2. Making the most out of a drought: The crop was planted, germinated and even grew some, but the water shut off and it has stalled. With no rain in the future forecast, rather than losing the entire crop, harvest what is available and make the best out of a bad situation. It may not be enough feed, but it will be something.
- 3. Higher digestibility: Early chopped corn silage has significantly better digestibility and sugar content. There may not be as large a quantity, but protein and digestible fiber quality are greater than if it was chopped at a later maturity.
- 4. Harvest help: Most farms in your area will wait until later in the season to harvest. That means you may be able to beat the rush on custom harvester demands by chopping early. In the case of harvesting your own silage, there may also be additional help from local farms with hauling and packing because they are not in the field yet.
- 5. Manure application: Manure application can be a tight window for application due to weather, available land and storage capacity. Chopping corn silage early opens up land, providing a whole new opportunity for manure application and taking stress off storage and time constraints.

Disadvantages of chopping early

There is a good and bad to many circumstances found on the farm. Below are the challenges associated with having to harvest corn silage earlier than usual:

- 1. Out of feed: Harvesting early means there is little if any feed left at the time of harvest, and freshly chopped corn silage will likely need to be fed. Fully fermented feed is more stable, nutritionally predictable and gentle on the rumen. However, less mature feed, along with its higher digestibility and sugar content, has elevated moisture and acid content. This can mean that the production rate of passage in the digestive tract quickly accelerates with fluctuating intakes.
- 2. Reduced tonnage: Chopping corn early also means that the plant can be shorter than normal and is typically missing the ear. Corn grain and the ear account for a large portion of the harvest, so coupled with a short plant, the total feed removed per acre is significantly reduced. Do not plan on having an abundance of inventory when needing to chop early and consider trying to stretch harvested feed with other bought-in forage or purchased nutrition.
- 3. Less starch: Kernels are almost the sole contributor to starch content, and without an ear, energy levels will be dramatically lower. Although the sugars will help, starch is a big driver of performance and production, whether it is milk or average daily gain. Highly soluble sugars will also challenge rumen stability as well as intakes. Most rations will need to be adjusted with purchased feedstuffs.
- 4. Higher moisture content: Even in drought-stressed corn, most do not realize the amount of water found in the stock. Young plants have a great capacity to store water, and early chopping means low dry matter. With elevated water levels, expect large amounts of runoff from storage areas. This runoff is rich in sugar and soluble protein, some of the most valuable components of corn silage. We end up purchasing feedstuffs to replace some of these components, which is why typical corn silage is harvested under 68% moisture, minimizing extra juicing from storage. Not only is it nutritionally valuable, but silage runoff can also damage local water sources.
- 5. Harvest help: This can be advantageous as well as detrimental. Farms that rely on traveling custom harvesters may need to find a different harvester if the crew is not in the area at the time of harvest.
- 6. Damaged crop or nitrates: Weather-related causes for an early harvest do not stop when the crop leaves the field. A damaged crop will likely bring mold and yeast in from the field, causing an abnormal fermentation. Forage treatments like an inoculant or preservative are essential when storing the damaged crop. Nitrates will be present in drought-stressed forages, so test before feeding green or fermented feeds. Fermentation metabolizes some nitrates but testing any forages with nitrate concerns is always good practice.

Early harvest can be a necessary evil. In times of need, the benefits outweigh the negatives. Even though it can come with new challenges, these can be managed. Always test whole plant moisture before harvest at any time of year and practice good storage and feed-out management. All feed is expensive and poor management is not an option. Protect all investments made on the farm. Work with your local <u>Hubbard Feed representative</u> to learn how to make the most of an early harvest.