

TIPS TO HELP GUIDE YOUR CORN SILAGE HARVEST

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University of Wisconsin Research and on-farm dairy herd performance clearly demonstrates the advantages of harvesting corn silage at the recommended whole plant moistures. With corn silage making up a significant portions of dairy rations, getting the moisture right will provide for higher milk yields per ton of silage feed.

Dairy cows perform best when whole plant moistures are harvested in the 65% to 70% range. This moisture range also works well for achieving good packing and fermentation in horizontal silos. Increased seepage losses, increased acidity, and lower dry matter intakes are common problems when whole plant moistures are greater than 70%.

If storing in up-right silos, plan to target whole plant moistures in the 62% to 65% range. Corn silage harvested at 60% moisture or less, consistently results in reduced fiber and starch digestibility.

Target Corn Silage Harvest Windows

Take note of when corn fields targeted for silage harvest are silking. Silage harvest usually begins 42 to 47 days after silking, or at approximately 50% kernel milk. Kernel milk, however, is not a good indicator of whole plant moisture. Sampling plants from the field and testing for moisture is recommended to accurately determine whole plant moisture. Hybrids, soil moisture, soil fertility, weed control, and sample location within the field all impact the whole plant moisture and dry down rate.

Ideally, fields to be harvested would be uniform but rarely is this the situation. Research conducted at the UW-Research Farm at Arlington in 2003, found that knoll areas of the field were as much as 20% dryer than corn plants growing in lower areas of the field. Keep in mind significant rainfall events will rehydrate moisture stressed corn plants by as much as 6% to 8% moisture within a day or two.

Sampling Guidelines

1. Sample two or more locations for each representative area within the field. If sampling more than once, sample the same locations to determine the rate of dry down.
2. Sample 3 to 5 plants in a row that is well bordered and representative.
3. Chop as quickly as possible and put in a plastic bag.
4. Use NIR for the most accurate moisture results. When using a Koster oven or microwave, add 2 – 4% moisture onto test results to account for residual moisture.

Use 0.5% per day as an average dry down rate during the month of September. Depending on the year the average dry down rates for September range from 0.4% to 0.7% per day. On the other hand daily dry down rates during September can vary greatly from near 0% per day to as much as 1% per day.

Recommended Moisture Content (%) for Corn Stored in Various Types of Storage Structures.

- Horizontal bunker silos 65 – 70%
- Upright oxygen limiting silos 50 – 60%
- Upright concrete stave silos 62 – 65%
- Bag silos 60 – 70%