

Reminders for Corn Silage Chopping Time



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- **When to start harvesting** - Harvesting at the correct moisture (dry matter) promotes favorable fermentation in the silage crop and decreases storage losses. The moisture content of the chopped plant should be the determining factor for when to harvest and not stage of maturity of the corn kernel per se. Silage should contain between 35 to 38% dry matter (62 to 65% moisture).
- **Length of chop:** Unprocessed corn silage should be chopped at 3/8 to 1/2 inch length and processed corn silage (with kernel processor) at 3/4 inch.
- **Adjusting silage choppers with on-line kernel processors:** To optimize starch digestion and provide adequate effective fiber, the recommendation is to cut to 3/4 inch theoretical length with an initial roller clearance of 0.12 inches or the thickness of a dime. If kernel breakage is not adequate, the roller clearance should be decreased. Roller clearance should be checked at the start and throughout a year's harvest season as corn kernel size can vary. To test whether adequate kernel damage is occurring, collect a silage sample from several loads, mix, and then measure out enough material to fill a 32 ounce cup. Pick out and count the number of whole and half kernels. If the number of whole or half kernels exceeds 2 or 3, improve kernel damage by adjusting the roller clearance. The corn cob should be broken into 6-8 pieces also.
- **Weight of tractor needed for packing bunkers and piles:** To achieve adequate silage density, the packing vehicle's weight and thickness of a layer of silage being packed must be taken into consideration. Thinner layers pack quicker. The packing vehicle weight determines filling rate (tons/hr) or to look at this differently, filling rate determines the weight needed for the packing vehicle. Filling rate or weight of tractors used to pack silage can be calculated using these equations.

$$\text{Optimum filling rate (tons/hr)} = \text{Vehicle weight (lbs)} / 800$$

$$\text{Optimum packing vehicle weight (lbs)} = \text{filling rate (tons/hr)} \times 800$$

(Calculations to achieve minimum packing density of 14 lbs/ft³)

- **Remember:** Fill all silos quickly, cover piles, uprights and bunkers with plastic, and for bunkers make sure tires touch to weight down the plastic.
- **Nitrates in drought stressed corn:** In drought areas, test for nitrates before feeding. Nitrate levels are generally reduced by 50% in silage which has been fermented properly. The highest level of nitrates is found in the bottom part of the stem, so raising the height of cut from the soil surface may reduce nitrate levels in the harvested crop.

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