Harvesting Immature or Mature Corn Silage

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Adverse weather during the month of September has left many producers in a predicament. Strong winds from a hurricane and significant amounts of water have left many fields lodged and/or water logged. How should this material be handled?

Immature and high moisture corn silage. Lodged, immature corn silage should probably be harvested as soon as possible to minimize spoilage in the field. Compared to alfalfa, corn silage in general is a forgiving crop to ensile. Alfalfa ensiled below 28-30% DM are prone to clostridial fermentations. However, harvesting immature (very wet) corn silage seldom leads to a clostridial fermentation. The major concerns with wet corn silage will be seepage losses and a highly acid silage that might cause some depressions in DM intake. Because immature corn silage will more than likely have a low concentration of starch but high concentration of fermentable sugars, fermentation will be extensive and maybe more prone to have a lower ratio of lactic:acetic acids. Extremely immature and wet corn forage should probably not be processed. However, this forage will ensile quickly (as do most corn silages) and the quick drop in pH and acidity will prevent most clostridial growth.

Wet corn silage packs well and because of the low starch content, aerobic stability is not usually an issue later at feedout. In some instances there may be a significant soil contamination in lodged corn that might bring in more clostridia. If there appears to be heavy soil contamination, addition of a classical microbial inoculant based on homolactic bacteria may be used. An alternative to harvesting extremely wet crops would be to add an high quality adsorbent. Past research has shown that dried beet pulp and ground corn or wheat have been used to increase the DM content of wet forage. In such instances a significant amount of adsorbent must be added and distributed evenly throughout the harvested forage to ensure a homogenous material at feed out. For example, raising the DM content of 1 ton of 22% DM corn forage to about 30% will require the addition of about 300 lbs of dried beet pulp or corn grain per ton of wet forage.

Mature and dry corn silage. On the other harvest extreme, water soaked fields may prevent equipment from harvest at optimal plant DM (32-35%). In cases of overly mature corn silage that has high DM content greater than 40%, poor packing and aerobic

stability problems at feed out may be the issues to deal with. Very, very dry CS (>45%DM) will have reduced fermentation because of lack of moisture for bacterial growth. For dry silages, my suggestion is to decrease chop length (a bit) (for processed CS back down from 3/4 to 1/2 inch chop - instead of 15-20% on the top screen of the PSU box go for about 10%) and use an inoculant designed to improve aerobic stability, e.g. one containing *L. buchneri.* An alternative is to use a buffered propionic acid based product. Fast packing, tight packing, and sealing immediately will be "must do's" for this drier material.