

Harvesting & Feeding Guidelines for Corn at Various Stages of Maturity.^{1,2}

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Harvest Stage	% Yield Potential	Moisture	CP	NDF	NDFD	Starch	Forage to Grain Ratio	Harvesting Considerations	Feeding Considerations
Vegetative	35-40 %	85.0	12.5	60.0	70.0	0.0	100 / 0	Harvest as silage. Plant may contain too much moisture to ensile. Summer/Drought: Monitor moisture and nitrates and ensile at proper moisture content. Fall: Let freeze and monitor moisture. Consider applying an inoculant.	Feeding characteristics are similar to a typical grass. Allocate to heifers and dry cows. For lactating cows supplement grain. Some of the supplemental grain may need to be fine ground. Forage is low in Ca and buffering capacity.
	40-45 %	83.0	11.2	66.0	68.0	0.0	100 / 0	Harvest as silage. Plant may contain too much moisture to ensile. Summer/Drought: Monitor moisture and nitrates and ensile at proper moisture content. Fall: Let freeze and monitor moisture. Consider applying an inoculant.	Feeding characteristics are similar to a typical grass. Allocate to heifers and dry cows. For lactating cows supplement grain. Some of the supplemental grain may need to be fine ground. Forage is low in Ca and buffering capacity.
Blister - Early Milk <i>...note, highly variable, rapidly changing quality</i>	60-65 %	81.0	9.0	61.0	68.0	2.0-10.0	90 / 10	Harvest as silage. Plant may contain too much moisture to ensile. Summer/Drought: Monitor moisture and nitrates and ensile at proper moisture content. Fall: Let freeze, monitor moisture, consider applying <i>Lactobacillus Buchneri</i> to increase aerobic stability if starch contents are > 10.0 %.	Feeding characteristics are similar to a typical grass. Allocated to heifers and dry cows. Silage may be very low in pH. For lactating cows supplement grain. Test corn silage for starch content. Starch contents may be low but starch is very degradable.
	75 - 80 %	77.0	8.5	55.0	66.0	10-20.0	75 / 25	Harvest as silage. Plant may contain too much moisture to ensile. Summer/Drought: Monitor moisture and nitrates ensile at proper moisture content. Fall: Let freeze, monitor moisture, consider applying an inoculant such as <i>Lactobacillus Buchneri</i> to control aerobic stability.	Corn silage will contain starch that is rapidly degradable. Silage may be high in fermentation acids. Feeding rates may need to be limited to reduce acidosis potential. Thus silages that are stored in flexible locations with excellent aerobic stability are preferred. Consider adding buffers to the diet to stabilize rumen pH. Consider adding 2-4 oz of urea to cow diets to stabilize rumen pH if needed. Diets may not require fine ground corn.
Milk - Early Dough <i>...note, highly variable, rapidly changing quality</i>	90-95 %	73.4	8.0	49.0	65.0	24.0	65 / 35	Harvest as silage. Plant contains too much moisture to ensile. Monitor moisture and nitrates and ensile at proper moisture content. Late summer/drought: Silages can reach proper moisture content for ensiling quickly under good drying conditions. Fall early frost, silage may require extensive drying time reach proper moisture. Consider applying an inoculant such as <i>Lactobacillus Buchneri</i> to control aerobic stability. Attempt to store in locations that provide flexibility. Salvaging grain for high moisture corn generally not advised. Kernels are too wet to make high moisture grain. Grain can be salvaged as snaplage but feeding options are limited. Kernel processing may not be required.	Corn silage will contain starch that is rapidly degradable. Silage may be high in fermentation acids. Feeding rates may need to be limited to reduce acidosis potential. Thus silages that are stored in flexible locations with excellent aerobic stability are preferred. Consider adding buffers to the diet to stabilize rumen pH. Consider adding 2-4 of urea to the diet to stabilize rumen pH if needed. Diets may not require fine ground corn. Test for starch content. If corn is made and fed from this stage as high moisture corn or snaplage irreversible milk component losses may occur due to excessive and or rapid starch degradability.
	95 -100%	71.0	8.0	46.0	61.0	29.0	55 / 45	Monitor moisture content and make as normal corn silage. Kernel processing may not be required. Consider applying an inoculant such as <i>Lactobacillus Buchneri</i> to control aerobic stability. Conserving as high moisture grain is possible but risky. Kernel moisture content is borderline (high) and some additional drying time maybe required.	Corn silage will contain starch that is moderately degradable however normal aspects of corn silage feeding should apply. Diets may not require fine ground corn. Test for silages for starch content. If harvested for high moisture corn and moisture contents are high the amount fed may need to be limited because of rapid starch degradability. Because feeding rates of high moisture corn may need to be limited high moisture corn stored in a flexible location with excellent aerobic stability are at a premium. Energy contents of high moisture corn maybe low.
3/4 Milk Line	100%	64.0	7.5	43.0	60.0	31.0	50 / 50	Monitor moisture content and harvest as corn silage. Consider kernel processing. Monitor moisture content and harvest as high moisture corn. Consider inoculating high moisture corn with <i>Lactobacillus Buchneri</i> to increase aerobic stability.	Feed as normal corn silage or high moisture corn. Monitor starch digestibility changes over the storage time.
	100%	58.0	7.5	40.0	57.5	34.0	50 / 50	Harvest as high moisture corn. Delaying and harvesting as dried corn is also an option. If harvested for corn silage consider chopping finer and using a kernel processor. Harvesting as snaplage is risky as the material maybe too dry. Feasible if ears can be mechanically removed without retention of husk and ear shanks.	Feed as normal high moisture corn or dried corn. For corn silage starch may be slowly degraded. Some fine ground corn maybe required in the diet if low starch digestibility is suspected. Monitor starch digestibility changes over the storage time.
1/2 Milk Line									
Black Layer									

¹ Adapted from Lauer, J. 2004. Negotiating the Value of Immature Corn Silage. Wisconsin Crop Manager. September 9, 2004. 11(24):158:161.

² Mention of specific inoculants or inoculant management practices is only intended as a consideration. Under certain conditions the feeding level of immature corn silage may need to be limited in the diet therefore silages that are Specific inoculant species mentioned above may not be necessary in all situations. aerobically stable and can be fed under slow silo removal rates maybe required.