

## PRICING CORN SILAGE

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Arriving at a fair and equitable price for corn silage is difficult due to the number of factors involved that are dynamic and biologically variable. Some factors include production costs, grain price, harvesting costs, costs of handling, hauling and storage, grain drying costs, fertility value of stover, and forage quality.

The amount of moisture has a major influence on its feed value and needs to be considered to accurately determine fair silage prices. (See the back of this page for making adjustments to corn silage prices based on different moisture levels.) Corn growers will want to calculate the price based on corn grain yield, while some dairymen will want to calculate the price based on alternative forages. In either case the final price is affected by supply and demand within a region.

In one common method the corn price is used to establish the per ton price of corn silage based on the grain value in a ton of corn silage. This will vary from about 5 bushels of grain/ton of silage for poor quality corn that would yield only 50 Bu /acre up to 7.4 bu. of grain per ton of silage for corn that would yields 150 or more bushels per acre.

For example, if corn is priced at \$2.00 per bushel and grain yields were determined to be 150 bushels per acre then corn silage at 65% moisture would contain 7.4 bushels of grain per ton of corn silage. The corn silage price would be \$14.80 per wet ton. Using an average yield of 21 tons of silage at 65% moisture per acre, the corn silage price/ acre would be \$310.80, which would need to cover all production costs. Further negotiation would need to be conducted over harvest, ensiling, and storage costs.

Harvest costs would need to be added onto this if it was being harvested and delivered by the seller. Custom harvesters usually charge between \$4 -7 per ton of silage delivered to the silo or bunker. Putting the final price at \$20 - 23 per ton in this example. In all of these examples little attention is paid to the relationship between

grain yield and forage yield under differing production levels.

The simplest and crudest estimate is to consider that a ton of corn silage has about the same forage quality as 130 to 150 RFV (or RFQ) on a dry matter basis. Therefore corn silage on an as is basis (assuming 33% dry matter) is worth about 1/3 the value of dairy quality hay. So if dairy quality alfalfa is \$120 per ton then corn silage is worth about \$40 per ton silage. Note that this assumes no value to the higher protein of alfalfa.

The \$40 per ton figure is starting point to figure price. If the buyer harvests the corn silage, the price could be reduced by the harvest cost just as it would if the buyer bales the hay that is purchased. Further, there should be some allowance for storage loss of silage. The loss of hay will be less than 2% if stored under a roof. Corn silage losses with good management generally run 10 to 15%.

One significant refinement to the above calculation is to measure forage quality of the corn silage because it is so variable. We recommend in all cases, when buying corn silage based on forage quality, that the purchaser should have the chopped corn tested as it is harvested to determine forage quality.

## Determining Corn Silage Yields

1. Select a representative area in the field
2. Measure number of inches between the rows
3. Harvest the length of row shown below based on row width.

<b>Row Width</b>	<b>20"</b>	<b>30"</b>	<b>36"</b>	<b>40"</b>
<b>Length of Row to Cut</b>	<b>13'</b>	<b>8'3"</b>	<b>7'3"</b>	<b>6'6"</b>

(1/2000 acre)

4. Weigh the whole plant corn harvested
5. Weight of corn = tons of silage per acre
6. Repeat this in 4-5 areas of the field and take an average for your final silage yield estimate.