

ESTIMATING CORN SILAGE AND GRAIN YIELDS

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Requests are often made to estimate corn silage and grain yields before harvest. Most of these methods are very close and actual yields can vary for a number of different reasons (field variability, number of samples taken, harvest maturity, etc). Nevertheless, here are some “quick and dirty” methods to estimate corn silage and grain yields.

Corn Silage Yield Estimates

a. Based on grain yield

For corn that has been stressed with limited grain yield potential, about 1 ton of silage per acre can be obtained for each 5 bushels of grain per acre. For example, if you expect a grain yield of 50 bushels per acre, you can expect about 10 tons per acre of 30% dry matter silage (3 tons per acre dry matter yield).

For “normal” corn yielding more than 100 bushels per acre, about one ton of silage per acre can be expected for each 6 to 7 bushels of grain per acre. For example, if expected grain yield is 125 bushels per acre, corn silage yields will be about 18 to 20 tons per acre of 30% dry matter silage (5 to 6 tons per acre dry matter yield).

b. Based on plant height

If little or no grain is expected, a rough pre-harvest estimate of yield can be made by assuming that 1 ton of 30% dry matter silage can be obtained for each foot of plant height (excluding the tassel). For example, corn that is 5 feet tall with little or no ear will yield approximately 5 tons per acre of silage at 30% dry matter (1.5 tons of dry matter).

c. “Bundle and Weigh” method

Although more time consuming, plants can be cut and weighed based on the distance to equal 1/100th of an acre dictated by row width. This distance for common row widths is as follows:

¹ Randy Shaver, Mike Rankin, Gary Frank, James Leverich, Keith Kelling, Jeff Key, Joe Stellato, Joe Lauer, Mike Ballweg, Bob Kaiser, Lee Milligan, Craig Saxe, Ron Schuler, Dan Undersander, and Brian Holmes

Table 1. Row length equivalent to 1/1000 acre at various row widths

Row Width (inches)	Length in feet for 1/1000 acre
30	17.4
36	14.5
38	13.8
40	13.0

In 10 different areas of the field, measure the appropriate distance and cut and weigh corn plants. To figure yield, total the weights from the 10 areas and divide by 20 to figure tons of wet silage per acre. For example, in 36-inch corn rows we weigh corn in 10 random areas from 14.5 feet of row. Total weight is determined to be 320 pounds. Dividing 320 by 20 it is estimated that the silage yield will be 16 tons per acre. Note: most accurate estimates will be made when weights are taken as close to harvest time as possible. Make adjustments in moisture content where this is not possible.

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