

Estimating Corn Yields Prior To Harvest

A fairly quick and accurate method in estimating yield based on the number of kernels produced involves five steps.

I. The first step is to determine the average number of ears per acre by counting the ears in 1/1000th of an acre (17'6" in 30" rows or 13'8" in 38" rows). Count all of the plants except those with really small ears. Thirty ears in 1/1000th of an acre would be an ear population of 30,000 ears per acre.

II. The second step involves evaluating ears to establish the size of the average ear. Walk to a random spot in the field and husk back ten ears in a row; remove the most average looking ear in the group. Collect one ear from three to four random spots in the field

III. After you have selected three or four averaged sized ears, it is time for step three, which is to calculate the average number of rows and kernels per row on your set of average ears. If three ears are 14, 16, and 14 rows around, the average rows per ear is 14.7 ($14 + 16 + 14 = 44 / 3 = 14.7$). To determine kernels per row, start counting about three kernels from the butt end of the ear, and count up to about 3 kernels up from the top. Average the kernels per row counted on the ears.

IV. Step four involves determining how many kernels of the size on your average ears it will take to equal a bushel of corn. Kernels per bushel will vary by hybrid and by growing conditions. Usually, kernels per bushel for large kernels will be about 80,000, 90,000 for a medium sized kernel, and about 100,000 for a small kernel. Shell a handful of kernels off the ears and estimate the kernels per bushel based on the kernel size you observe.

V. To calculate yield use the formula:

Ears per acre x Rows per ear x Kernels per row / by Kernels per bushel.

For example, if there are 30,000 ears that average 15.3 by 42, and the kernels per bushel is estimated to be 90,000, the yield would be 214.2 bu/a ($30,000 \times 15.3 \times 42 / 90,000 = 214.2$ bu/a)

SILAGE HARVEST

Monitoring kernel milk line is the most accurate method of determining the proper time for silage harvest.

PROPER WHOLE PLANT MOISTURE CONTENTS		
Type of Silo	Milk line	Whole plant moisture
Bags or Bunkers	1/2 Down	68% to 72%
Upright silos	2/3 Down	63% to 68%
Oxygen Limiting	3/4 Down	50% to 60%



