BETWEEN THE ROWS®

Performing Yield Estimates

Wyffels.com
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In late summer and early fall many corn growers evaluate fields and make yield estimates either for corn storage or marketing purposes. Timing of weather conditions at various stages of growth results in highly variable crop appearance and differences in yield. Obtaining an accurate yield estimate may require multiple samples throughout a field.

Estimate on a whole field basis

When conducting whole field yield estimates, the Yield Component Method is commonly used and is calculated by multiplying average harvestable ears per acre (HEA), times average k/ear (AKE), divided by number of kernels per bushel (KPB). Or simply HEA x AKE / KPB = estimated yield in bu/ac. This yield estimate is determined by actual field samples to collect data on average harvestable ears per acre and number of kernels per ear. The third component is the number of kernels per bushel, and typically 90,000 k/bu is used as an average.

Perform estimates for each specific hybrid

Wyffels Research has developed a factor for k/bu for each hybrid (listed on the chart, page 2). This factor has been updated with 2016 data and newly released hybrids listed. Not all hybrids have yield factor data available. Products from the same genetic family use the same yield factor. This factor can vary based on the growing conditions each year. Hot and dry conditions can cause smaller kernel size and increase kernels per bushel. These factors should serve as a good baseline to use for each genetic family in order to be as accurate as possible.

If seed set is scattered on the ear, the kernel size may increase thereby decreasing the number of kernels per bushel. In fields impacted by heat and drought or that have reduced stands, more samples will be needed to ensure reasonable representation of the entire field. This yield estimate is best done at least 2 weeks after pollination at the R3 (milk stage) and beyond.

The exact kernel/bushel for each hybrid will vary each year based on crop conditions, but the differences between hybrids remain consistent. So, even in more variable conditions these serve as a great tool to see differences between hybrids when performing yield estimates.

Take Samples

Use the following protocol to ensure more accurate estimates.

1. Measure 1/1000th of an acre in one row (17'5" for 30-inch rows) and count the number of harvestable ears present.
2. Collect every 7th ear to get a representative sample.
3. Count and multiply the number of kernel rows around by the number of kernels in a row for each ear. For example: 16 kernel rows around x 34 kernels per row = 544 k/ear.
4. Average and record the kernel counts of at least 3-5 ears in each harvestable ear count and use to determine average ear size (kernels/ear) in that location.

   Do several harvestable ear counts across the field to fairly represent all the conditions present. Ten or more locations may need to be sampled in a field that's variable.
5. Use location averages to arrive at overall average harvestable ear counts and ear size (kernels per ear). Multiply the average harvestable ear count by average ear size to obtain number of kernels per 1/1000th acre.
6. Divide the result by 90.0 (representing 90,000 k/bu) to calculate the estimated yield. 90,000 is an average that many growers use. For specific hybrids, use the factor listed below in the calculation.

This yield calculation uses actual harvestable ear counts, so low stand counts are accounted for in the estimation. This makes an accurate ear count very important. Simply using the planting rate will lead to a large error in estimated yield.

If the field also has evidence of root lodging, some additional calculation may be necessary to account for additional yield loss. Root lodging can reduce yields, but the stage of growth has an impact on the amount of actual loss. Root lodging at early vegetative growth stages (before V10-V12) may cause yield reductions of 0-5%. When root lodging occurs at R1 and beyond, yield reductions range from 10-30%. The actual yield lost by root lodging is impacted by weather conditions and other agronomic factors that occur after damage is present.

Stalk lodging can also cause yield loss and some estimates indicate about 1/3 of stalk lodged plants may be lost at harvest. Some of these losses may occur after a yield estimate is made. You may want to account for this possibility in your estimate.

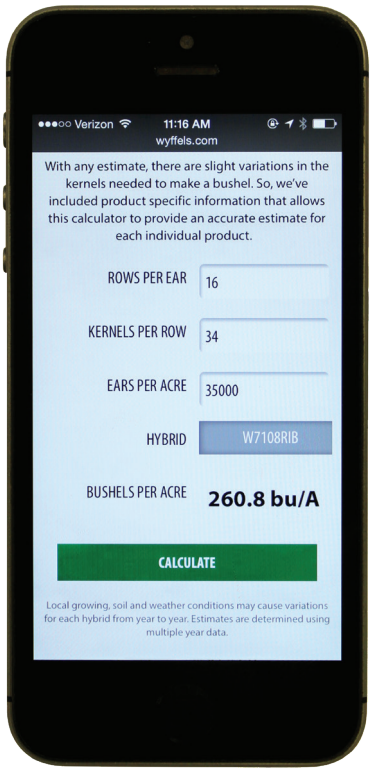
YIELD FACTOR

Genetic Family	Factor	Genetic Family	Factor
W1516RIB	82	W6826RIB	69
W1546RIB	73	W6898RIB	77
W1588RIB	73	W6906RIB	68
W1636RIB	78	W6946DGRIB	66
W2086RIB	79	W6956RIB	70
W2196RIB	78	W6978RIB	67
W2236RIB	76	W7198RIB	68
W2276RIB	80	W7338RIB	76
W2288RIB	82	W7456RIB	66
W2506RIB	76	W7578RIB	67
W2618RIB	84	W7696RIB	72
W3018RIB	85	W7726RIB	75
W3488RIB	79	W7878RIB	66
W4196RIB	72	W7888RIB	75
W4358RIB	72	W7956RIB	64
W4638RIB	68	W7976RIB	69
W4796RIB	74	W8148RIB	75
W5086RIB	72	W8228RIB	75
W5518RIB	73	W8268RIB	73
W5626RIB	74	W8646RIB	69
W6408RIB	76	W8936DGRIB	68

Wyffels Yield Calculator

In order to make yield estimates easier and more efficient, Wyffels has developed an online yield calculator. The Wyffels Yield Calculator can be found on Wyffels.com mobile site. This calculator has been pre-programmed with all of the specific hybrid factors for each hybrid in the Wyffels lineup. To use the calculator, follow these simple steps.

1. Open an internet browser on your mobile device and navigate to www.Wyffels.com
2. From the mobile site menu, select 'Yield Calculator'.
3. Enter the coordinating values that you collected for kernel rows per ear, kernels per ear row and harvestable ears per acre.
4. Select the hybrid you are performing an estimate on.
5. Click 'Calculate' and view the results.



Summary

Estimating yield can be difficult and variable. Increase the number of ear samples obtained and thoroughly cover the field to obtain your best estimate. Using the specific hybrid factor for each hybrid will help you fine tune estimates for your Wyffels products.

From the desk of

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WYFFELS HYBRIDS®