

## **In-Field Tips for Collecting Accurate Yield Monitor Data for Harvest**

It is that time of the year to starting thinking about fall harvest. For those who collect yield monitor data, the first few days of the harvest season are a good time to ensure one is collecting accurate information. The first item on the yearly checklist should be verifying the firmware is up to date on the in-cab monitor and your GPS system. This may require checking with your dealership or visiting the company website. Check the system software every year to make sure the most current version is being used.

Perhaps the most critical need is to calibrate the yield monitor as it affects yield estimates across all fields. While some operators use calibrations stored in the display from previous years (always double check to see how well previous calibrations are performing), most will need to perform new calibrations. For each calibration, try to conduct separate loads that span the variability of yields (high to low) expected when harvesting fields. Generally, one can change combine speed or header cut width to vary crop flow through the machine to create this variation while calibrating. *Figure 1* shows an example of how different calibration load points (in red) can be created by changing speed or cut-width to vary the flow rate through the machine.

In general, 3,000 to 6,000 lbs of grain are needed for each calibration load. Harvesting a full semi-load of grain per calibration load point will not necessarily improve calibration accuracy. Some yield monitors may only allow a two-point calibration, so it is best to calibrate a point of high flow, then one for a lower flow rate through the machine.

Remember separate calibrations are needed for different crops (e.g., corn or soybeans) and accuracy will generally improve when calibrating for significant moisture variability for a crop (e.g., high and low moisture corn). It should be noted with recently commercialized optical yield monitor systems (such as those available from CLAAS, Trimble, and Raven); test weight measurements become even more crucial when there is a change between different hybrids and crops.

In the end, remember that most well calibrated yield monitors should be able to estimate yields within 1% to 3% on a full-field basis. When looking at the sub-field scale, errors exceeding 3% can exist.

## **Further Resources**

The following publications from University of Nebraska Extension go into more detail on collecting accurate yield data from management decisions:

- [Precision Agriculture: Best Management Practices for Collecting Accurate Yield Data and Avoiding Errors During Harvest.](#)
- [Improving Yield Map Quality by Reducing Errors through Yield Data File Post Processing.](#)

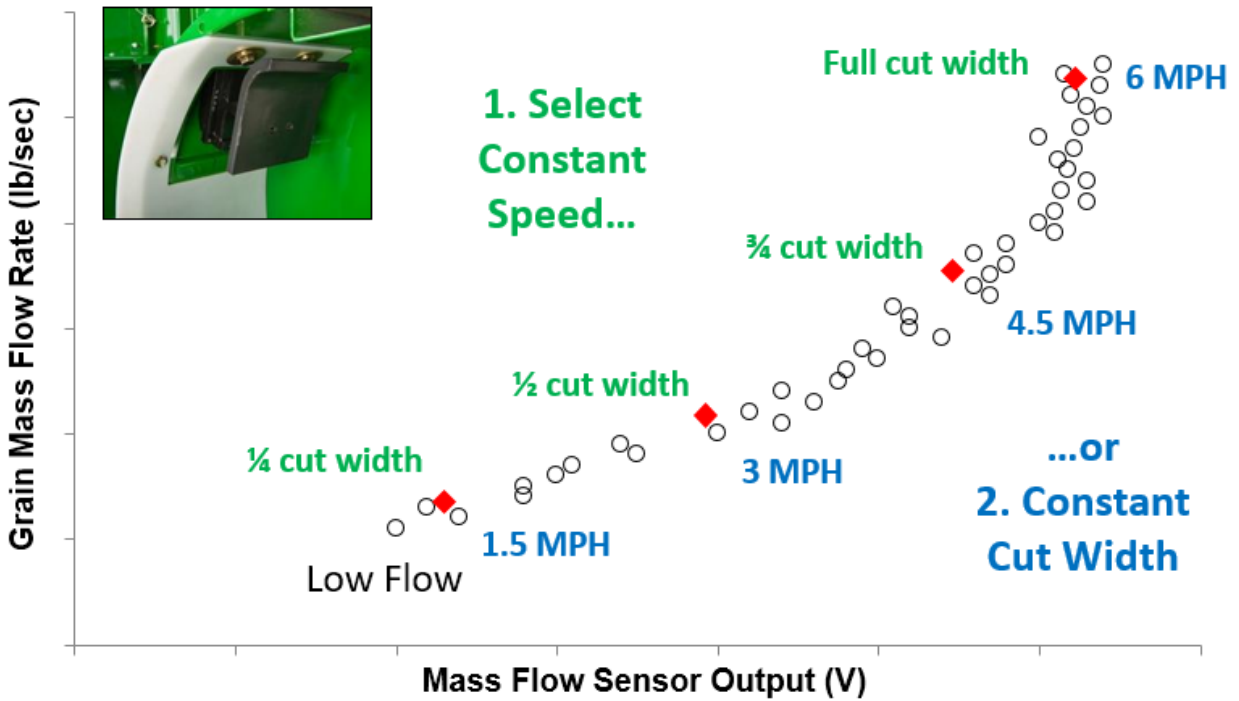


Figure 1: Two methods for varying clean grain elevator flow for yield monitor calibration: method 1 (in green) uses constant speed with varying cut-width; method 2 (in blue) uses constant cut-width with varying speed. Either method can be used to generate calibration loads (points in red) for your yield monitor.

Article adopted from <http://cropwatch.unl.edu/2016/field-tips-collecting-accurate-yield-monitor-data-harvest-2016>