

Yield Mapping Part 1: Any Yield Map is Better than No Yield Map

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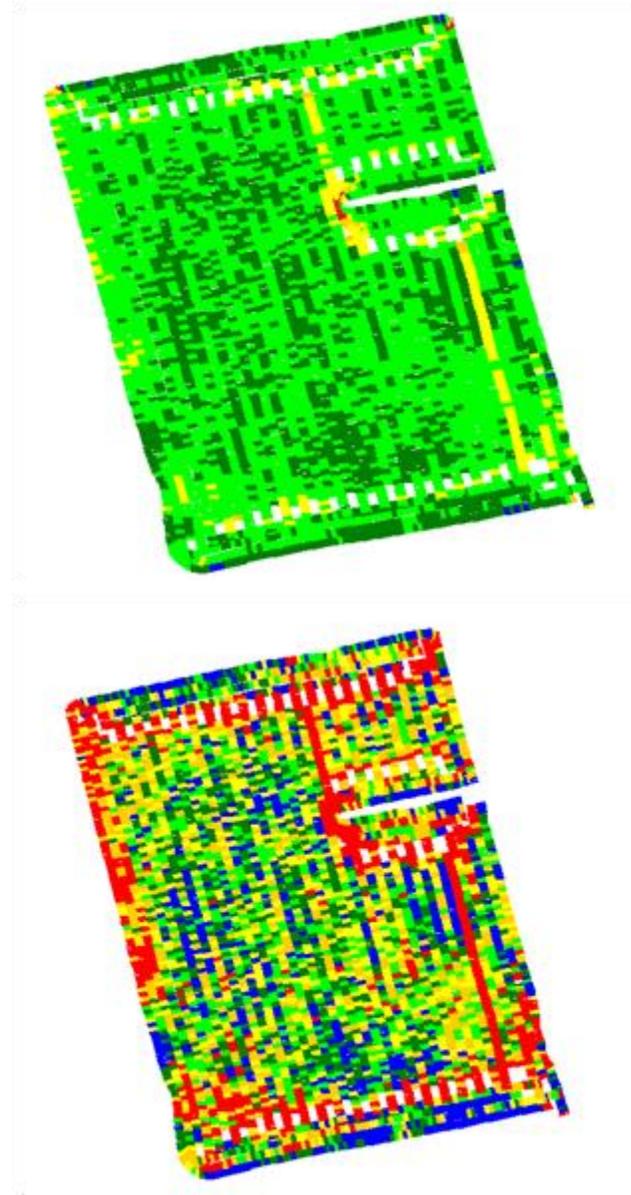
The greatest disservice ever perpetrated by the so called experts was when someone with very little mapping experience and a fear of being caught out told newbie yield monitor operators that they weren't going to be able to make any sense of their yield maps until they had about 10 years of data. So they merrily watched the little numbers go up and down the scale while they were harvesting and either did not bother to hook up a GPS or didn't download the data. Data that was downloaded was left to vanish on old computer systems and expired software. Sure, the yield maps of the 90's had their share of wobbly GPS and inconsistent field names. The original SRAM style of data card needed specialized card readers. A computer with software ready to import these files was required. But for those who went ahead despite the advice of the head shakers the value of harvesting information now has a 17 year headstart.

Fast forward to this decade and there is no longer any excuse for not making a map of the yield data. A reliable GPS signal is easy and relatively cheap. With as little as a \$1000 GPS mounted to the roof and plugged into the monitor takes minutes to mount, power and start logging. You do not need RTK to make a creditable yield map. But if you are running RTK, why wouldn't you log your yield data as carefully as the other high accuracy applications? Monitor systems made after Y2K have data cards or USB drives that are easier to read than the original formats- so that problem isn't there except for those still running legacy aka antiquated systems. Screens now show maps as you go, typing field names is easier and the ability to track varieties and performance is worth the few button clicks or screen taps it takes to get there.

So why is it that most of the ag chat forums out there are full of good equipment talk and much less about the information? I think it is because the monitor equipment manufacturers have taken all the big stumbling blocks away and now it is all about the software. The equal and other side of this process happens in the office, not in the cab. To get the most out of the yield monitoring experience, the hand needs to be on the mouse once it is off the steering wheel. I don't for a

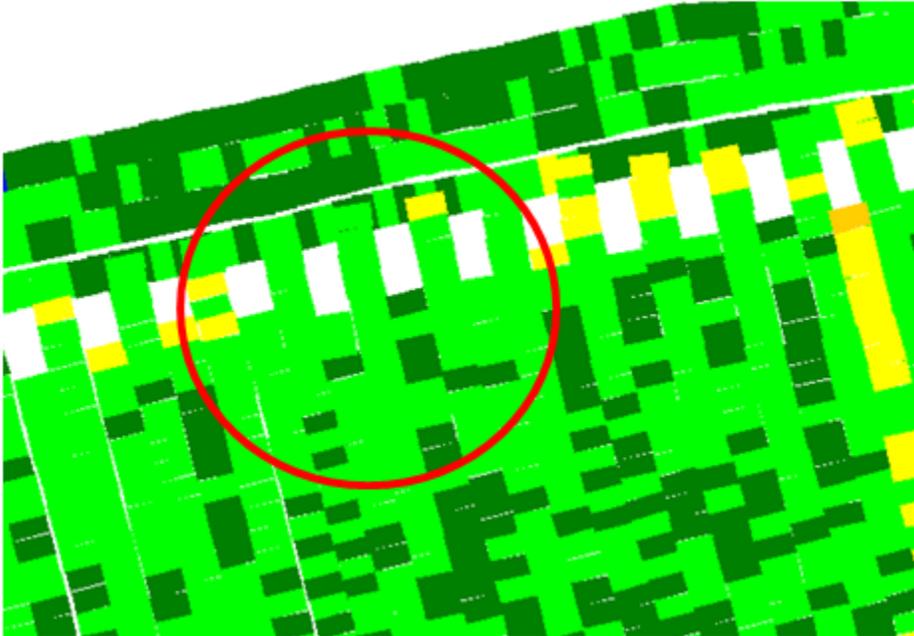
minute believe any customer who says they are not much into computers as an excuse. If you can operate a cell phone you can make a yield map: 10 mouse clicks from download to view. Or there are industry service providers who have that 17 year head start in experience to work with.

Here is a preview of the first lessons from your first yield map. I have picked a completely un-exciting example to illustrate that if nothing else, the yield map is a combine diagnostic tool. 2009 Soybeans, 23 acre field- Average yield: 62 bu/ac Standard Deviation 6.5 bushels

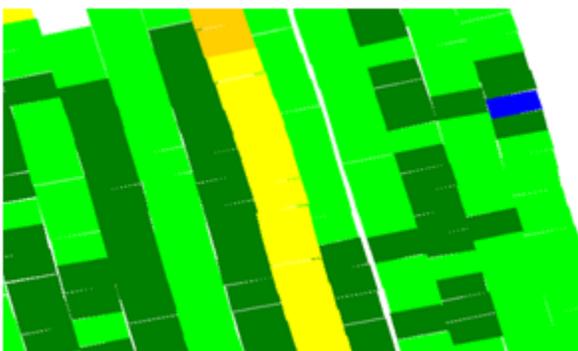


Initial Observations: This was not a highly variable crop. No dramatic yield patterns are evident. I have shown it with two different legends. The more colourful legend is more breaks, but at 2 bushels per colour, the effect is the same: not a great deal of yield difference exists across the field. Perhaps the field

has uniform soil characteristics, a perfect growing year or excellent fertility management? Question for the next yield year: Does this uniform harvest happen in other crops and under different growing conditions? If there is no variability then there might be little opportunity to manage this field in a site specific manner. So move on. Does this mean nothing else can be learned? Look more closely:



1. This closeup shows the combine flow delay settings need to be adjusted. The monitor is not properly assigning yield to the correct position in the field. See how no data logs until 4 seconds into the field, and keeps logging into the headland even when header is up? This map is a diagnostic tool to fine tune the settings. This data can be reprocessed now that it is in the office to correct this problem, but the operator needs to adjust combine monitor settings to avoid this problem in subsequent maps. The map function to fix this in SMS is to choose the reprocess data menu. What other anomalies can we see?



2. Obvious yield dip from forgetting to switch swath size. Stipes like this in the data will not only skew averages and totals, but make the yield patterns harder

to interpret. This map serves as an operator reminder to bump swath width down where appropriate. The SMS function to alleviate this is to go to Simple Analysis/Optimize Swath.

3. Another way to look at the map post season is to utilize the dataset playback function found in Farm Works or SMS Advanced to review combine dynamics. Future blogs will explore this advanced function. In spite of this being an unexciting little field map, there is a lot that can be learned about the combine and a chance to become familiar with the software tools from even one year's map.

Karon from 2011