

Blog Archive: Presentations

Introductory comments presented to Precision Ag Conference Feb 26, 2014

(Author's Note: I presented this information at the kick off of the 2014 Precision Ag Conference hosted by Farms.com in 2014. Many of these points are still valid in 2019, so I am hereby tendering them again in a repeat blog post.)

Thank you to Farms.com and all of the conference sponsors for an opportunity to meet with interested industry peers and producers to focus on the direction of Precision Ag in Ontario.

- Most, if not all, of the participants here today have been engaged in the pursuit of best on-farm management practices and best customer service opportunities for as long as Precision Ag tools have been in existence. Ontario Agri-Businesses; the major crop input suppliers, the Ontario ag laboratories, progressive farmers and independent consultants have been actively engaged in the use of precision ag management philosophies and the tools of the trade for 20 years. This is not a new concept. We are going to start seeing new names for it. There is talk of returning to the term site specific, or perhaps predictive ag or Aginformatics as the industry increasingly applies new analytics to apply the best agronomy, operational efficiencies and optimal resource management.
- If you have been sitting on the sidelines waiting for the magic answer to be presented or a one stop easy button to be mounted in your tractor cab, then you have missed the point that Precision Ag is a process, and it is different for every business involved. Not every Precision Ag tool is appropriate for every operation. Business managers have to constantly assess what is available to them in terms of technology, equipment, personnel competency, financing, marketing and then decide on a course of action.
- In this past 20 years we have had several major tipping points after which the pace of adoption accelerated. First it was differential correction, then the removal of selective availability, which paved the way for guidance light bars, then steering and GPS integration. The parallel path of developments in computing and the burgeoning of the internet and wireless communication in the same time frame brought electronics from black box to touch screen and software from DOS all the way to the cloud. Now that connectivity to the internet is as close as your phone and soon to be ubiquitous in the field, in the cab and in the office the next tipping point is finally all about the data: who has it, who has access to it, who you are sharing it with and of course what you can do with it.
- Here is the thing: while a light bar or steering can happen with just some equipment, none of the other precision ag practices can happen without information, in particular location based information. You cannot make a variable rate strategy without a map. You cannot practice variable rate seeding or fertilizer without first defining in map form, where you want the changes in rate to occur and here is the punch line: and WHY? What criterion; information, assumptions, history, measured value or formula are you going to use to create those rates?
- Here's the kicker: chances are you already have that information, because we have 20 years of the ability to gather much of that spatial information. We have field boundaries, site specific soil sampling, yield mapping, EC mapping (electromagnetic induction), remotes sensing (bare ground satellite imagery analysis, in season satellite imagery analysis, optical sensor data), topographic mapping, geo-referenced tile mapping and water management. All of these information types have been possible and highly used in Ontario. We (all sorts of players in the industry) have millions of acres of data. That might be considered BIG DATA.
- But there is more. The very fact that we can use a connected resource; aka the internet, to fluidly move information from the collection point to the decision maker between advisors or collaborators and then back to the field is a game changer. In the 90's Dale Cowan @scsagronomy coined a phrase "from the

Blog Archive: Presentations

field, to the office, back to the field” to explain the data path. This concept has never been truer, but it is faster and there are more data detours both positive and negative, that exist in today’s data environment.

- BIG DATA can now be gathered faster, from more sources, more quickly and more easily. And we have more sophisticated software to process, combine and analyze all this data and computing power to do it on a very large scale. We have some very influential companies dealing in massive scale data movement, data housing, data processing, data analysis and data sharing.

- In the past three weeks alone I have seen 5 data collaboration announcements between companies who have vast amounts of incoming data and they are presenting new ways for growers and industry to avail themselves of the benefits of these linkages.

I am going to make 7 statements for you to consider as you discuss the course of Precision Ag in your operation. And yes, I am poking the bear here.

1. I DO NOT think that using BIG DATA will remove the day to day guesswork out of farming. That is a load of crap. But analysis of BIG DATA might provide us with another perspective that must be critically examined by the individual decision maker.

2. The biggest danger lurking at this tipping point is that we think we see the glimmer of that “Easy Button” and it is being flashed about like shiny beads. “Sign up for my service and all your data will magically be whisked to the cloud and you never have to worry your pretty little head about messy things like computers or software or USB sticks.”

3. Please do not get caught up in the next shiny bead that is the UAS craze. YES they are VERY Cool. YES they are going to bring us tons of imagery that is going to be VERY illuminating.....but it is all about the imagery, not the UAS that got it. And the imagery is NOT an easy button either.

4. BIG DATA most benefits he (or what company) that owns it. So when we think of data sharing, we have to consider sharing with whom and there is both a front door sharing and a back door sharing that is inherent with BIG DATA providers.

5. READ THE TERMS OF SERVICE or EULA. In many cases releasing your data to the service provider gives them unrestricted access to do whatever else they want with it. They might be removing your name from the data, but hello folks, it is geo-referenced data. Aggregate Data may be more anonymous, but that is where the BIG DATA hunters bag their game, that is the money prize to be able to sell summary data back to you in the form of reports and services or to a another company who wants it for marketing purposes, or to a Wall Street hedge fund, or pretty much anywhere they want. Think about it.

6. But WAIT! What about, what I will call small data? Small data is YOUR data. Your production decisions, agronomic approaches, crop history, yield data (read revenue data), your management decisions, your livelihood. Shouldn’t you have absolute access in perpetuity of your own data? Shouldn’t it be job one to protect the information and maybe get your hands dirty with that first or in addition to taking advantage of having your data join other data in the cloud?

7. If you have some data gathering tools, then to steal a phrase from another fairly successful company: Just Do It! There is no absolute right or absolute wrong. Make a plan. Try it out. Measure the results. Try again. You have the tools to gather, to visualize, to execute and then to evaluate. Learn to speak ‘map’ with your own data. Then share the data. You will be in a better position to evaluate the results of BIG DATA analysis if you have a grasp of your own data first.

Blog Archive: Presentations

- Tomorrow morning I am going to highlight 10 important “Small Data” tips for you to consider so you can be the first beneficiary of your own DATA and in doing so be better positioned to take advantage of the BIG DATA and the many other service offerings on the horizon as you wade into the next 20years of precision ag.

Karon Cowan

@AgTechGIS