

# THE U.S. JOURNEY IN FARM DATA PRIVACY AND SECURITY AND LESSONS FOR AUSTRALIA

American Farm Bureau Federation  
May 25, 2011

Mary Kay Thatcher  
American Farm Bureau Federation®  
June 25, 2015



AMERICAN FARM BUREAU FEDERATION®

First “Lesson” – Issue is moving quickly – we are  
“peddling as fast as we can”.



# In the beginning... (about May 2013)





# Data “sharing” – – – what is anonymized, aggregated, and “family of companies”?

- ▣ “If we use your data about your operation for purposes outside of consulting with your operation, we may aggregate and anonymize your data with similar data from other growers. The aggregated, anonymized data does not contain information that could be used to specifically identify you or your operation. We may also share your data within the family of companies and with contracted third parties to help us provide information and services that may be of interest to you.”

June/July 2013



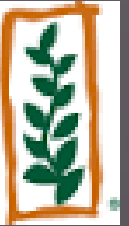
IDM

Independent Data Management, LLC



JOHN DEERE

MONSANTO



PIONEER

BECK'S



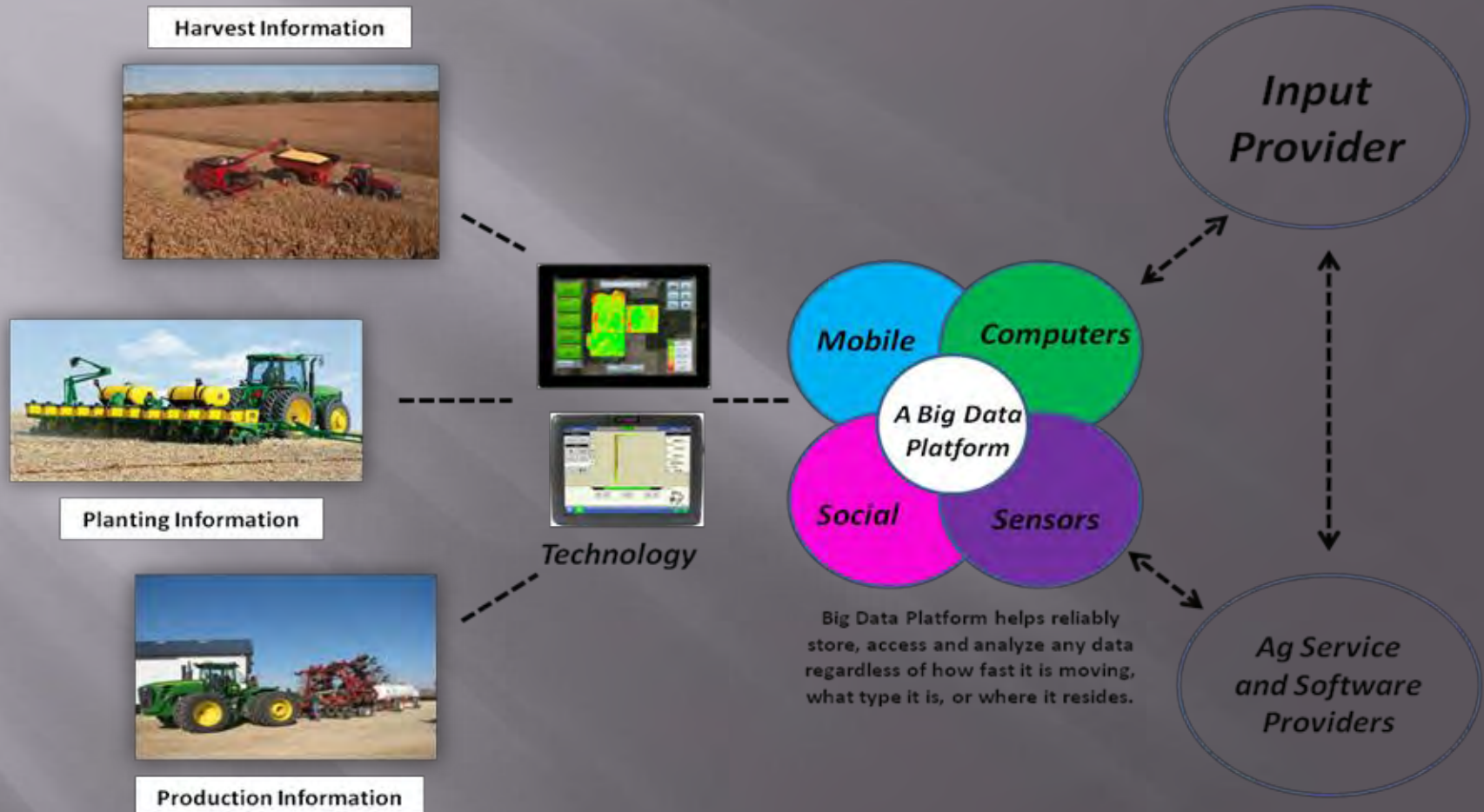
HYBRIDS

**CASE II**  
AGRICULTURE



# Think About Nine – Before You Sign

September 2013





## December 2013/January 2014

Proprietary data collected from farming and agricultural operations is valuable, should remain the property of the farmer, and warrants protection. We support:

- Efforts to better **educate** farmers and ranchers regarding new technology or equipment that may receive, record, transmit, share and/or sell their farming and production data;
- Requiring anyone who is collecting, storing, and analyzing proprietary data, including photographs, to provide **full disclosure of their intended use of the data**;
- Formation of standardized protocols regarding privacy and terms of conditions to ensure a **standard definition** of all components within the contract. We should be an active participant in developing these protocols;
- **Compensation to farmers** whose proprietary data is shared with third parties that offer products, services or analyses benefitting from that data;
- Multiple participation options being included in all contracts;
- All proprietary information between the farmer and the company remaining between the two entities. This would not preclude a farmer from sharing data with whomever he/she chooses (e.g., a consultant);
- Ensuring proprietary data are stored at an entity that is not subject to a **Freedom of Information Act** (FOIA) request, utilizing all safeguards, including encryption, to protect the data;
- The farmer's right to enter into agreement and their rights to sell their proprietary data to another producer (e.g., in a land sale);
- Private companies entering into agreements which would allow for the compatibility/updating of equipment and updating of software;
- The **right of a farmer to have access to their own data**, regardless of when it was shared with a company;
- Language in user agreement contracts to allow producers **to remove their past aggregated data from the company's database and revoke that company's ability to sell or use that data in the future**;
- Programs to increase producers' awareness on how their data is being managed, secured, protected or used;
- Ag-tech providers **(ATP) assuming liability of all data breaches**;
- ATPs clearly explaining the **definition** of the terms "affiliate," "business partner" and "third party" and **in all precision ag contracts**;
- Farmers having the ability to control when and where they utilize precision ag technology, i.e. **field-to-field kill switch**; and
- The **development and use of independent, third-party evaluation** of the variables used by ATPs in their privacy policies and user agreements.

**We oppose any federal agency or FOIA-eligible entity from serving as a data clearinghouse for all proprietary data or aggregated data collected by private companies.**

# Eight Major Questions for U.S. Farmers

- ▣ What info is being collected?
- ▣ What control does the farmer have over the info that is collected?
- ▣ With whom does the ATP share the information?
- ▣ Who else can obtain my data?
- ▣ Will the ATP notify the farmer if their policies/procedures change?
- ▣ Can I delete my data from an ATP's database?
- ▣ Who is liable if there is a data breach?
- ▣ Can I get paid for my data?



## 2014 FieldScripts<sup>SM</sup>

### FARMER PRIVACY COMMITMENT

Monsanto is committed to conducting business in a manner that supports and ensures the privacy and security of your personal and business information. Employees are informed of this commitment and are expected to perform in a manner that supports this commitment.

#### **Sharing (Onward Transfer)**

- **We will share Information only with our subsidiaries and business partners.**
- We do not share, trade or sell Information with marketers.
- We may publish data related to FieldScripts, including the results of FieldScripts; however, we will not disclose your name, field location or images of your field without your express written consent.

# Market manipulation?



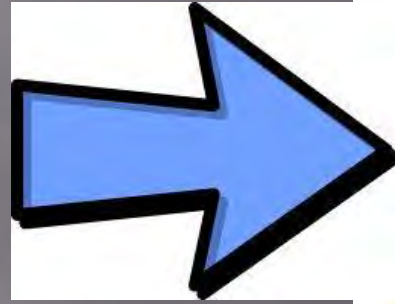
# Not “if” but “when”

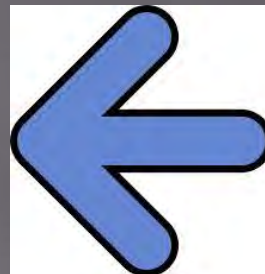
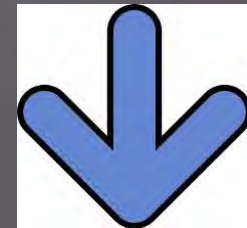


**Dear Target Guest,**

As you may have heard or read, Target learned in mid-December that criminals forced their way into our systems and took guest information, including debit and credit card data. Late last week, as part of our ongoing investigation, we learned that additional information, including name, mailing address, phone number or email address, was also taken. I am writing to make you aware that your name, mailing address, phone number or email address may have been taken during the intrusion.







# EPA RELEASES PRODUCER INFORMATION TO ANIMAL RIGHTS GROUPS



NCBA was notified by the EPA in February 2013 that the agency had been collecting information from states on CAFOs. The information was requested by extremist groups, including Earth Justice, the Pew Charitable Trust and the Natural Resources Defense Council through a Freedom of Information Act request and the was given to them.

The information released by EPA covers livestock operations in more than 30 states, including many family farmers who feed less than 1,000 head and are not subject to regulation under the Clean Water Act.



**“My data is valuable – and I want to be paid for it.**



**\*\*Almost every company is unwilling to share**

**\*\*Charge was \$10-\$15 for “prescriptions”, then \$3 and now often “free”.**

# Big Data Comes to the Farm, Sowing Mistrust

## Seed Makers Barrel Into Technology Business

By JACOB BUNGE

Feb. 25, 2014 10:38 p.m. ET



David Nelson, a farmer near Fort Dodge, Iowa, uses tractor-mounted computers to help make decisions about his plantings of corn and soybeans. *Ryan Donnell for The Wall Street Journal*

Big agricultural companies say the next revolution on the farm will come from feeding data gathered by tractors and other machinery into computers that tell farmers how to increase their output of crops like corn and soybeans.

# Farmers up in arms over potential misuse of data

While big data application can make agricultural practices more efficient, the benefits come at the potential price of privacy



The American Farm Bureau is drawing up a code of conduct, but farmers are concerned the data on their individual farms might be misused, sold or leaked to rival farmers. Photograph: Daniel Acker/Bloomberg



# Despite concessions to U.S. farmers, Big Data giants still in control

Mon, Jun 23 2014

By Karl Plume

(Reuters) - In the tussle between U.S. farmers and Big Data purveyors, farmers are winning some control over details about crop and growing conditions on their land, but most data sellers are retaining ultimate say over how they can use the information that could be worth billions of dollars.

Although companies like Deere & Co and Monsanto Co's Climate Corp are giving some ground by putting legal teeth behind promises made during sales pitches, they are refusing to back away from claims they have an absolute right to all data collected as combines, tractors and other equipment work fields across the country.

Some farmers suspect they are not getting their share.

"It's a ploy, it's marketing. They're still after what they really want and that's to get the data for free," said Billy Tiller, a farmer and founding member of the Grower Information Services Cooperative, a farmer cooperative focused on data.

The controversy centers on the emerging new market for digital information systems sold by Climate Corp, Deere and other vendors. Mounted onboard farm machines as they work the fields, the new tools assist with precision planting, improved fuel efficiency, cost-efficient fertilization and other improvements to modern agronomy. They also collect and feed back the farm data, which data vendors can repackage and sell.

Big Data firms from the heartland could turn into big business for the handful of companies that dominate the market: equipment makers Deere and CNH Industrial and seed companies Monsanto and DuPont Pioneer. Monsanto has said Climate Corp could become part of a \$20 billion market, and DuPont Pioneer projects \$500 million in annual sales over the next decade.

Deere's careful recasting of contracts this spring highlight the dispute. Contracts for the agriculture giant's telematics service no longer grant Deere open-ended rights to use all the data it collects for unspecified "business purposes." Instead, they grant Deere the right to use data only "as needed to provide telematic services."

But in a separate document Deere provides to customers, the company's data services and subscriptions policy, Deere declares it is free to use all the data it collects, however it sees fit, so long as it strips away personally identifiable information.

So far, farmers have been willing to share data to gain specific details on farm conditions, and companies have said they do not intend to pay farmers for data. But with Big Data companies planning to sell customer-made seeds or peddle precise crop production estimates, farmers now want a share of the value stream.

The American Farm Bureau Federation in January adopted an official policy calling for more transparency and farmer control. Farm Bureau officials met with several data companies this spring to drive home the point.

"Transparency is the golden rule of this data privacy conversation," said AFBF economist Matt Erickson.

Company responses vary. Climate Corp rewrote parts of its privacy policy this month, retaining the right to use farm data, promising not to use it to speculate on commodities prices, and stating it will obtain explicit consent for uses other than making improvements to Climate Corp's own products.

"We believe our policies are both responsive to farmer concerns and lead the industry in the clarity with which we outline how we will and won't use farmer data," CEO David Friedberg said in a statement.

CNH Industrial this month updated its user agreements to explicitly state that farmers own their agronomic data.

"I think the data policies from a number of the companies will evolve rapidly over the next few years," said Dave Larson, CNH vice president for agricultural equipment portfolio strategy. "The market's going to push it."

(Reporting by Karl Plume in Chicago; Editing by Ken Wills)

# Big data fueling Iowa farmers' productivity

This 'is something pretty powerful'

By Orlan Love, The Gazette

Published: July 15 2014 | 12:01 am in [Agriculture](#), [Business](#), [Business Rotator](#), [News](#),



Liz Martin/The Gazette Ken Cook harvests corn in his fields near Quasqueton in this 2012 photo.

# Working Group of 13

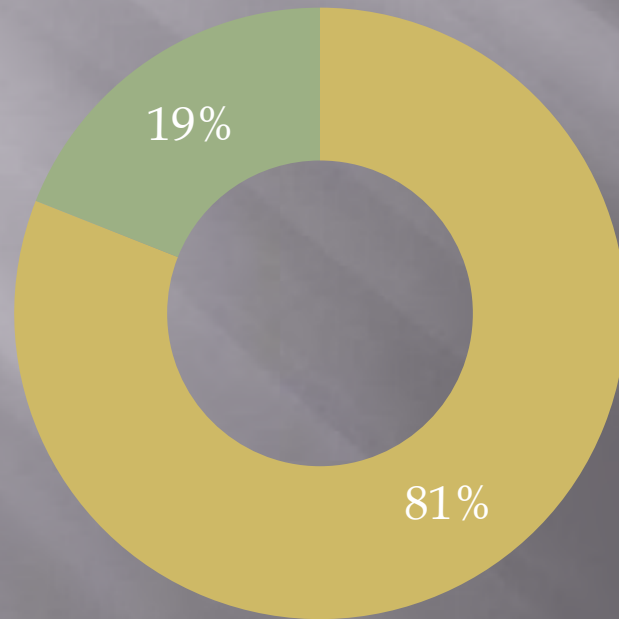
(April 2014)

- ▣ Farm Bureau
- ▣ Farmers Union
- ▣ Soybeans
- ▣ Corn
- ▣ Wheat
- ▣ Cotton
- ▣ Rice
- ▣ John Deere
- ▣ Monsanto
- ▣ Beck's Hybrid Seed
- ▣ Raven
- ▣ Pioneer
- ▣ Dow

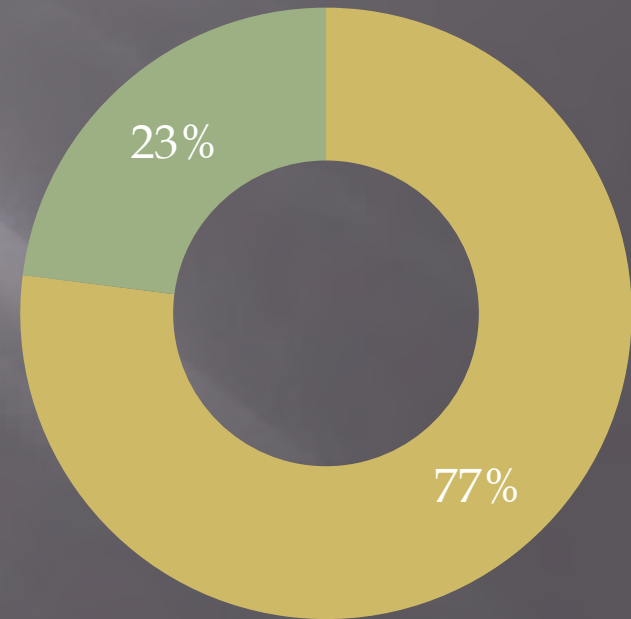


# 81% think they own their data and 77% are worried about data security

(September 2014 AFBF Survey)

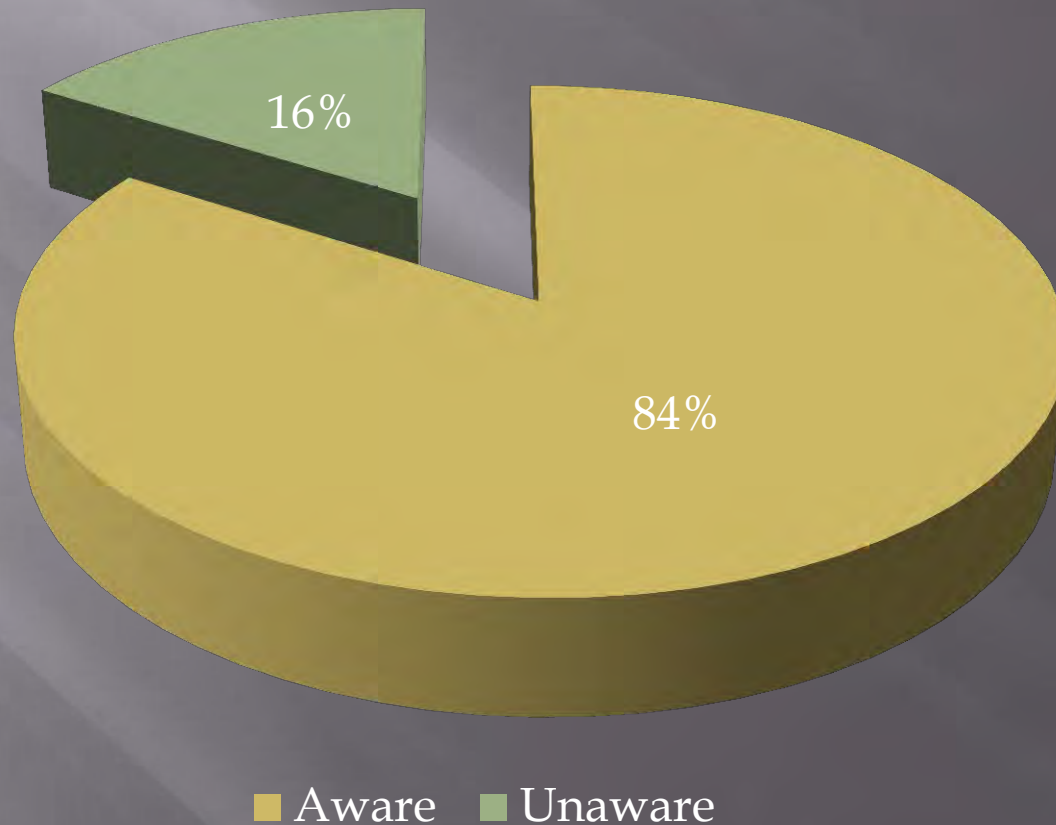


■ Yes ■ No



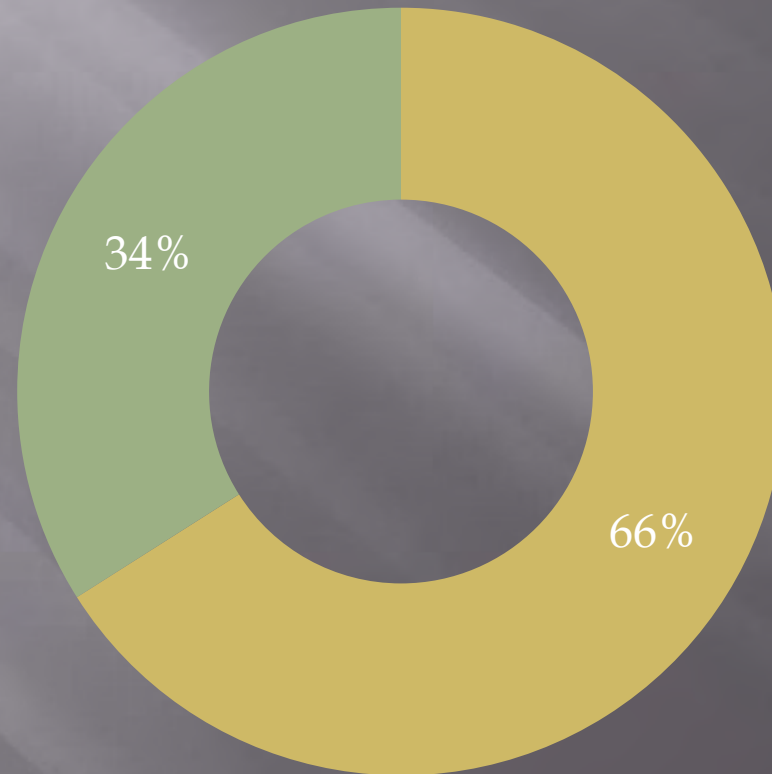
■ Yes ■ No

Only 16% of farmers are aware of the ways companies intend to use their data.



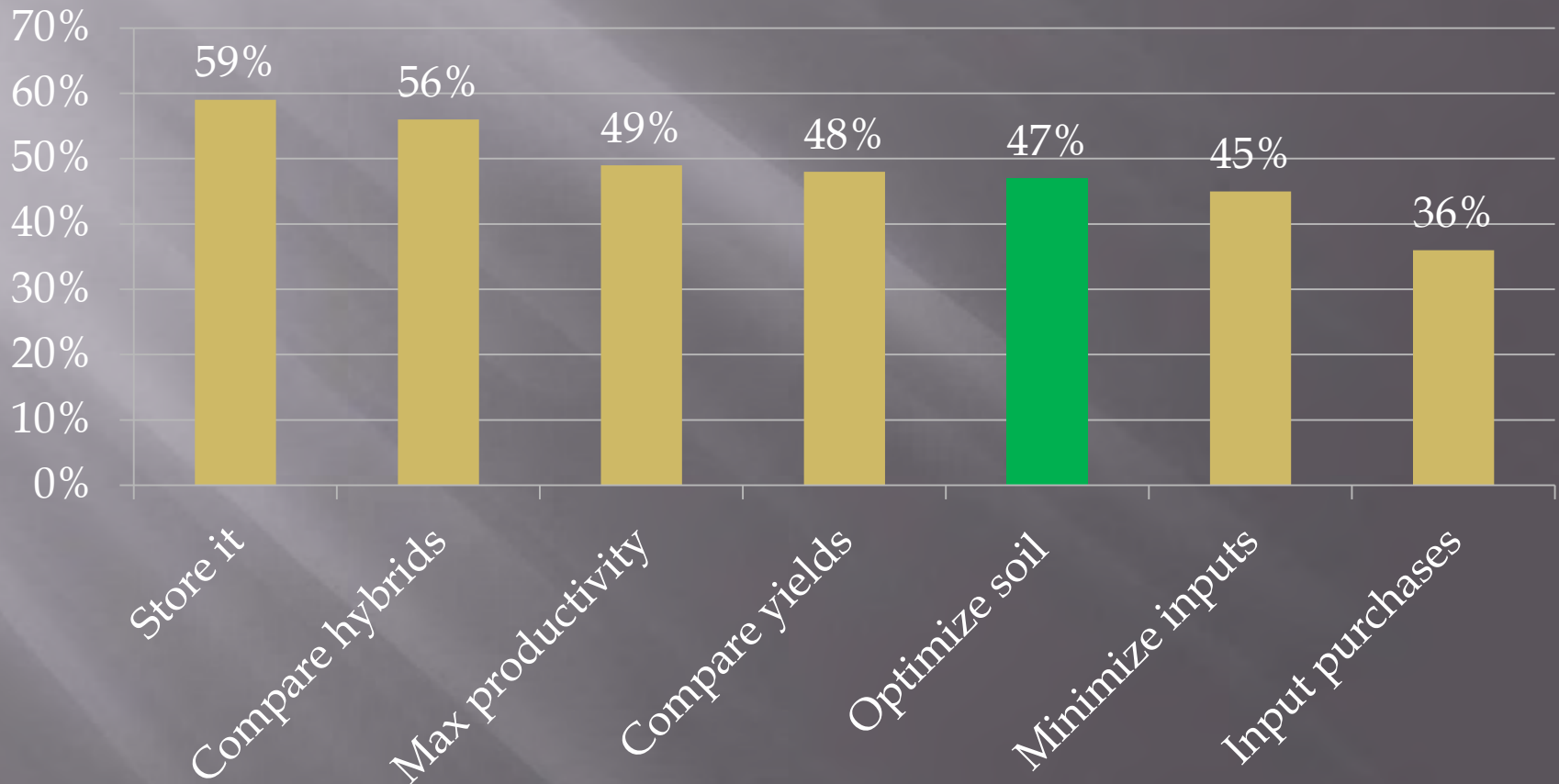
# Do you intend to use data analysis?

(September 2014 AFBF Survey)



■ Yes ■ Maybe Later

# Precision Data Use





# PRIVACY AND SECURITY PRINCIPLES FOR FARM DATA

(6–7 MONTHS -- NOVEMBER 2014)

.... the undersigned organizations and companies believe the following data principles should be adopted by each Agriculture Technology Provider (ATP).

....an ATP's principles, policies and practices be consistent with each company's contracts with farmers. The undersigned organizations are committed to ongoing engagement and dialogue regarding this rapidly developing technology.

# 37 Groups Signed 13 Principles

(April 2015)

- ▣ Education
- ▣ Ownership
- ▣ Collection, Access and Control
- ▣ Notice
- ▣ Transparency and Consistency
- ▣ Choice
- ▣ Portability
- ▣ Terms and Definitions
- ▣ Disclosure, Use and Sale Limitation
- ▣ Data Retention and Availability
- ▣ Contract Termination
- ▣ Unlawful or Anti-competitive Activities
- ▣ Liability and Security Safeguards

## “Lesson” on Working Groups

- ▣ Think about how you invite people into the group
- ▣ Must have a core group that somewhat knows and trusts each other.
- ▣ If there are too many, you end up with a lecture vs a good discussion.
- ▣ If you represent all of agriculture, it is hard for an ATP to sit across the table from representatives of virtually every customer.



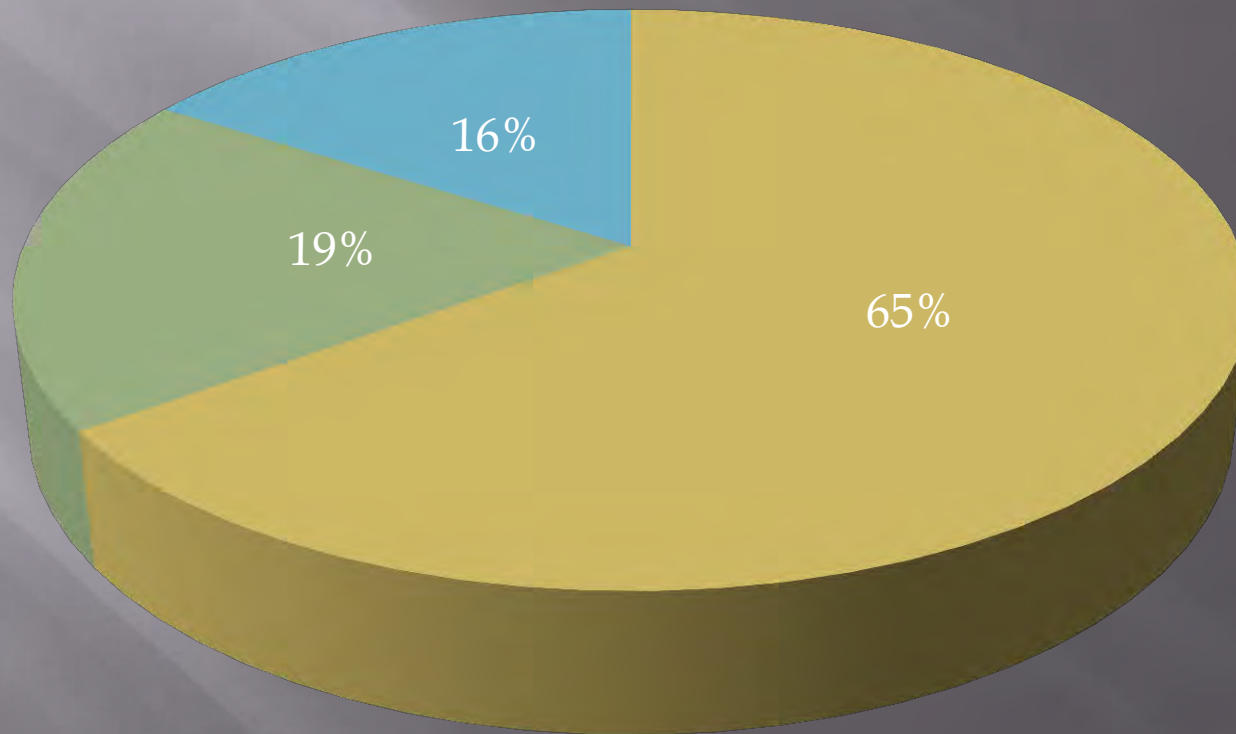
# HUGE “Lesson” – The process is working by “just” talking

- ▣ One CEO – privacy policy drafted but doesn’t say what I’m doing and certainly not what I want my customers to think I’m doing
- ▣ Large company begged me not to publish privacy and security documents until their privacy policy was changed so they could sign.
- ▣ Never thought “playing the CBOT” was a concern.
- ▣ Language in user agreement contracts to allow producers to remove their past aggregated data from the company’s database and revoke that company’s ability to sell or use that data in the future; (Email goes through 46 servers)
- ▣ Ownership vs. control

## Education -- “Lesson” -- If you ask a company “who owns a farmer’s data, virtually every response is “the farmer owns the data”.”

- ▣ **You own the data IF you own the data**
- ▣ --does the landowner own the data or the tenant?
- ▣ --what about a crop share agreement?
- ▣ --does the coop who applies the fertilizer own the data or the farmer who pays for the application?
- ▣ --does the owner of the precision ag hardware own the data or the farmer on whose land it is used?
- ▣ --IF the tenant owns the data, and the landlord is later required to prove compliance with an environmental regulations, how will he or she be able to do so?
- ▣ --IF the landowner owns the data, does it lead to higher rental rates for the tenant?

# How do you feel about the new technology?



■ Skeptical/Fearful   ■ Neutral   ■ Embracing



## From several sources--

- ▣ There's a lot of potential to use data more since 80% of the data being generated by farm machinery in the U.S. today still resides on those machines — it never gets into a form that can be analyzed and ultimately used by the farmer or others.

## “Lesson” – numerous audiences within agriculture (and maybe maybe mostly generational)

- ▣ Comfortable with technology, but not with usage, privacy, transparency issues
- ▣ Uncomfortable with technology (103 beta tests and only 20 downloaded and 20 more hired someone)
- ▣ Nonbelievers- “have more in their head about their farming operation than data could possibly provide” – Outlaw – “what’s a browser”?

## Everyone agrees we need to educate farmers about the technology, BUT....

- ▣ In a generic way, ATPs want to educate farmers to “remove the fear so they will use the technology more”.
- ▣ Farm groups want to make sure farmers understand the issues so they can make the decision that is best for them.
- ▣ From a “working group” perspective, this may be our biggest failure---



Farm Bureau finished the privacy and security principles and signed a “peace treaty” with the ATPs.

