

## **Precision Agriculture: The Business of Growth and How IP Laws Protect It**

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<https://www.dorsey.com/NewsResources/Events/Event/2017/10/Corporate-Counsel-Symposium-2017-Materials>**

1. PowerPoint Presentation
2. Dorsey eUpdate: *To Shoot or Not to Shoot? The Legality of Downing a Drone*, Jamie Nafziger, Dorsey & Whitney LLP (September 25, 2017)  
<https://www.dorsey.com/newsresources/publications/client-alerts/2017/09/the-legality-of-downing-a-drone>
3. Nebraska Cattleman Magazine: *Legal Issues Regarding Data Collected by Drones*, Jamie Nafziger, Dorsey & Whitney LLP (December 2016)  
<http://nebraskacattleman.org/NCdec2016/files/36.html>

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## Precision Agriculture

### What is it?

The Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture (USDA) has noted:

“There are many definitions of precision agriculture, and the definition is often influenced by the commercial equipment or technology currently in vogue. . . . [P]recision agriculture is defined as: a management system that is information and technology based, is site specific and uses one or more of the following sources of data: soils, crops, nutrients, pests, moisture, or yield, for optimum profitability, sustainability, and protection of the environment.”

- Precision Agriculture: NRCS Support for Emerging Technologies (NRCS 2007)

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## Precision Agriculture

- Targeted environmental management to optimize sustainable production
- Involves:
  - investment
    - research & development
    - partnerships
  - innovation
    - tailored products
    - reduced consumption
    - improved accuracy
- Results in economic value

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## Intellectual Property: Legal Standards

- Is data collected from farms protectable intellectual property?
- Trade secret protection
- Defend Trade Secrets Act (DTSA) defines trade secret as:
  - **information**, including a formula, pattern, compilation, program, device, method, technique, process, etc.;
  - that derives **independent economic value**, actual or potential, from **not being generally known to, and not being readily ascertainable** through proper means by, another person who can obtain economic value from its disclosure or use; and
  - **owner has taken reasonable measures to keep such information secret**
- Some farm data may qualify; info collected by drones may not

Grower's/landowner's  
knowledge of land and  
conditions

Historical records of  
field, seed, inputs, etc.  
and performance

Information from  
sensors – drones

Grower's/landowner's  
personal information

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## Farm Data

- **Data collection and analytics for use in decision-making**
  - Variable Rate Technology
- **Data Driven Products**
  - satellite imagery analysis
  - field and livestock monitoring
    - drones, smart ear tags, and other monitors
  - monitoring plant/soil health
    - sensors
  - agricultural robots
    - drones, tractors
  - predictive analytics

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## Types of Farm Data

Grower's/landowner's  
knowledge of land and  
conditions

Historical records of  
field, seed, inputs, etc.  
and performance

Information from  
sensors – drones

Grower's/landowner's  
personal information

**Different legal protections/issues for each type**

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## Thinking about on-farm data

Least detailed

- FSA reporting

- USDA market reporting

Most detailed

Most grower-specific

Most aggregated

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## Thinking about on-farm data

Least detailed

- FSA reporting

- USDA market reporting

Most detailed

Most grower-specific

Most aggregated

Precision Ag  
service provider  
involvement

Best Value Add

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## Licensing/Diligence

- Non-disclosure agreement needed up front?
- Which types of equipment will be used with project?
- Which pieces of software will be used?
- Which existing databases of information will be accessed?
- Who owns data being collected by each type of equipment/processed by each piece of software?
- Who owns farm-specific historical data being used in project (as-planted, as-applied, yield data)?
- Who owns other data being used in project (weather, satellite images, etc.)?



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## Licensing – Legal Considerations

- Who needs licenses to each type of data to make a project work?
- What are the limits of those licenses?
  - For what can data be used?
    - Just this project
    - Research
    - Other uses by vendors
    - Other uses by growers
  - Where can it be used?
  - With whom can it be shared?
- How will data be secured as it is shared between parties to contract and with others?
- Where will data be stored once collected?
  - Data repository?

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## Licensing – Legal Considerations (cont.)

- Will personal information of growers or others on-site be collected?
  - If so, best practices include
    - Use technological solutions available to minimize collection
      - [https://fpf.org/wp-content/uploads/2016/08/Drones\\_and\\_Privacy\\_by\\_Design\\_FPF\\_Intel\\_PrecisionHawk.pdf](https://fpf.org/wp-content/uploads/2016/08/Drones_and_Privacy_by_Design_FPF_Intel_PrecisionHawk.pdf)
    - Provide notice
    - Create privacy policy
    - Use special care if releasing to public
  - **Persistent and continuous** use of drones (UAS/UAV) may pose highest risk (security monitoring)
  - National Telecommunications and Information Administration Best Practices for drones
    - [https://www.ntia.doc.gov/files/ntia/publications/uas\\_privacy\\_best\\_practices\\_6-21-16.pdf](https://www.ntia.doc.gov/files/ntia/publications/uas_privacy_best_practices_6-21-16.pdf)

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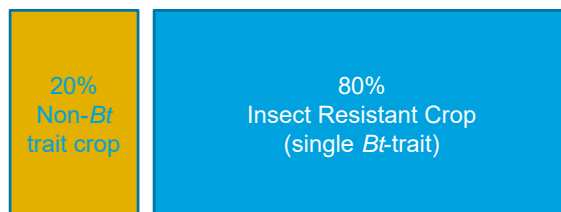
## Licensing – Legal Considerations (cont.)

- If drones are in use, who will bear risk of trespass, nuisance, and other legal risks in connection with operation?
- For non-negotiated agreements, what is risk of public relations fallout if growers don't understand licenses and sharing arrangements?

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## Farm Data in a GM-Crop World

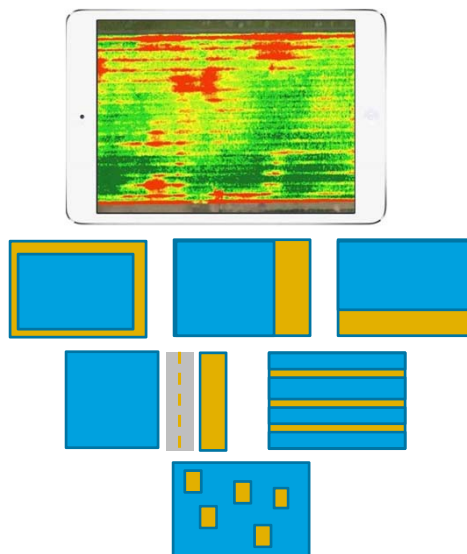
- Use of Precision Ag can assist in effective compliance with regulatory requirements
  - *Bt* – trait crops (insect resistance), for instance, require certain EPA-mandated “refuge” requirements to reduce risk of resistance



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- Refuges can be structured in a variety of ways. If this is your data on insect pressure in your field,

how might you comply with EPA requirements?



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## Farm Data in a GM-Crop World

- **Considerations of Patent and License Restrictions**
  - Most form grower agreements purport to prohibit “research”
  - But, the farmer’s own analysis for his/her use is permitted
  - Where does Precision Ag fall?

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## Farm Data in a GM-Crop World

- **Contractual and Regulatory Compliance**
  - Can Precision Ag data be used as a tool for policing compliance?
    - For technology providers?
    - For the government?

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## Drone Use in Precision Agriculture

- Ownership/licensing of data
- Privacy concerns
- Recent legislative initiatives
- Recent litigation
- Self regulation



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## Legal Framework: Privacy Overview

- No federal comprehensive privacy law (instead specific areas: financial, health, etc.)
- State laws
  - Violations of **reasonable expectation of privacy**
- Federal Trade Commission
  - Deceptive or unfair acts
  - Individual person and his or her device
  - Collecting, using and sharing of **personal information**
  - **Privacy policies** – notice & consent

Grower's/landowner's knowledge of land and conditions

Historical records of field, seed, inputs, etc. and performance

Information from sensors – drones

Grower's/landowner's personal information

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## Farm Data

- Elements of farm data that could be considered **personal information**
  - Grower and owner contact information
  - Geolocation of person or device
  - Image or video of person
  - Device identifiers
  - Credit card information
  - Financial information



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## Recent Legislative Attempts

- **Drone Aircraft Privacy & Transparency Act (introduced March 2017)**
  - FAA would collect
    - Data collection statement
    - Data minimization statement
  - Violations
    - FTC
    - State Attorneys General
    - Private right of action
    - \$1,000 per violation
- **Drone Federalism Act (introduced May 2017)**
  - State, local and tribal government authority may issue restrictions on time, manner and place of drone operations within 200 feet of ground or structure
- **Safe Drone Act of 2017 (introduced June 2017)**
  - Cybersecurity and operational concerns – seeking report from GAO
- **Drone Innovation Act of 2017 (introduced June 2017)**
  - Role of federal, state, local, tribal regulation; privacy; torts; criminal laws
- **Drone Operator Safety Act (introduced August 2017)**
  - Operation of drones near airports
- **Trump Administration – National Defense Authorization Act – Gov't may destroy drones that pose threat to safety/security; respect privacy, civil liberties (enacted 2017)**

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## Recent Legislative Attempts (cont.)

- Amend trade secret law to include farm data? Proposed by witness in House Committee on Agriculture hearing October 28, 2015 [http://agriculture.house.gov/uploadedfiles/10.28.15\\_ferrell\\_testimony.pdf](http://agriculture.house.gov/uploadedfiles/10.28.15_ferrell_testimony.pdf)
- Over 45 states have considered or enacted drone legislation
- Concepts in some proposed/enacted state laws
  - Identification of drone owner or operator on device
  - Registration with state
  - Prohibit municipalities from regulating drones
  - Tenants need written permission from landowner to use UAS on property
  - Louisiana – farm data collected through UAS belongs to legal owner of property where collected (La. R.S. 3:41-47)
  - Texas – misdemeanor to capture, disclose, display, distribute “image” of individual or privately owned real property (narrow exceptions); Ch. 423 of Government Code
  - Utah – misdemeanor to chase, disturb, harm livestock through UAS use (H.B. 217)
  - No use over critical infrastructure facilities
  - Permission for insurance companies to capture images so long as FAA certified

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## Recent Litigation

- EPIC case against FAA regarding lack of privacy regulation
- *Boggs v. Merideth* (W.D. Kentucky 2017)
  - D shot P’s drone down with shotgun
  - P alleged trespass to chattels
  - P sought declaratory judgment
    - Unmanned aircraft is “aircraft” under fed. law
    - P was operating drone in navigable airspace rather than on D’s property
    - P did not violate D’s reasonable expectation of privacy
    - Property owner cannot shoot at unmanned aircraft in navigable airspace when operating like P’s drone was
  - Fed. court dismissed for lack of subject matter jurisdiction
  - Question whether drone flying on D’s property or in fed. airspace not enough to give jurisdiction
    - Anticipatory defense not necessary to trespass to chattels claim
    - Dispute between two parties not significant to fed. system

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## Recent Litigation (cont.)

- ***Huerta v. Haughwout* (D. Conn. 2016)**
  - FAA sought enforcement of subpoenas to defendants
  - Defendants allegedly operated drone to fire handgun and flame thrower
  - Dicta: court expressed skepticism about whether flying drones on own property subject to FAA regulation
- ***Blanton v. Deloach* (S.D. Ga. 2015)**
  - Plaintiff alleged police violated privacy by following him with drone
  - Dicta: traditionally, watching or observing person in public place not intrusion upon privacy
- ***State v. Davis* (N.M. 2015)**
  - Aerial surveillance from helicopter unwarranted search
  - Partially turned on helicopter noise; court declined to consider quiet drones since not raised by facts of case

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## Self-Regulation

- **American Farm Bureau Federation**
  - Privacy and Security Principles for Farm Data (November 13, 2014; updated May 5, 2015)
  - Ag Data Transparency Evaluator
    - Not much adoption
- **Open Ag Data Alliance (OADA)** <http://openag.io/about-us/principals-use-cases/>
- **AgGateway data privacy and use white paper**  
[https://s3.amazonaws.com/aggateway\\_public/AgGatewayWeb/WorkingGroups/Committees/DataPrivacySecurityCommittee/2017-03-31%20Data%20Privacy%20and%20Use%20White%20Paper%20-%20201.2.pdf](https://s3.amazonaws.com/aggateway_public/AgGatewayWeb/WorkingGroups/Committees/DataPrivacySecurityCommittee/2017-03-31%20Data%20Privacy%20and%20Use%20White%20Paper%20-%20201.2.pdf)  
(Updated March 31, 2017)

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## Key Takeaways

- Precision agriculture innovations are protectable using various forms of Intellectual Property (IP)
- Innovations may be protected differently depending on ownership and the legal landscape
- Both intellectual property and privacy issues regarding data collected by UAS uncertain
- Due diligence required to answer producer questions about their data or required to draft privacy policies challenging in complex technology ecosystem
- For tech providers – getting grip on your data flows may become table stakes in precision agriculture
- Participation in standards development and legislative action likely helpful
- Notice, privacy policies and following best practices reduce risk in connection with drone use
- Focus on user agreements key