Precision Agriculture and Data Transparency
Policy Implications for AFBF Members
Prepared for FCC Precision Agriculture Connectivity Task Force
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# Overview

- **Who we are**

- **Precision Agriculture for AFBF Members**

- **Connectivity**

- **Issues**
  - **Connectivity**
  - **Cost**
  - **Data**

American Farm Bureau Federation®

# Who We Are and What We Do

## Over 6 Million Family Member, 51 states and Puerto Rico, 2800 counties



*Farm Bureau is the leading voice of farmers in Washington, DC, and our work goes well beyond policy issues. We're committed to engaging and developing the next generation of farm leaders, encouraging rural entrepreneurs, and giving back to our communities.*
- AFBF President Zippy Duval

# Precision Agriculture and Our Membership

*"Man – despite artistic pretensions, his sophistication, and accomplishments, owes his existence to a 6-inch layer of topsoil and the fact that it rains"*

- Precision Agriculture: Managing, tracking or enhancing crop or livestock production inputs, including seed, feed, fertilizer, chemicals, water and time, at a heightened level of spatial and temporal accuracy to improve efficiencies, commodity quality and yield, and positively impact environmental stewardship.

- Farmers are: Biologists, Mechanics, Accountants, Entrepreneurs, IT techs, Managers, Business owners, Conservationists, Soil Scientists, Chemists, Physicists,

- U.S. Farmers rely on some of the most sophisticated technology in existence to efficiently produce the most affordable food, fiber, and renewable fuel supply in the world.

# How we use it

# Challenges – Connectivity

- Connectivity in rural America is improving thanks to the efforts of FCC and USDA.
- This impacts not only Precision Ag stake holders, but families across rural America.
- More work is needed.

# Solar Storms and Outages

**Solar storms caused multiple outages for precision ag users around the world.**

# Challenges – Cost

- **According to a 2022 CoBank study, estimates the upfront cost for a private wireless 5G system with precision agriculture capabilities is about $55,000 dollars plus an additional $6,000 per year for annual subscriptions.**
- **This includes:**
  - **Radio Access Network (RAN) Equipment**
  - **Base Tower**
  - **Labor**
- **Challenging year in Agriculture**
  - **Commodity prices down**
  - **Input costs for things such as subscriptions remain elevated.**
  - **Creating financial hardship for farms**

# Developing Policy Issues – Data

- **According to FCC Commissioner Brendan Carr, a single plant in a field can generate 18GB of data.**

- **This means the average corn field can produce 18 times the amount of data as the Library of Congress.**

# Developing Policy Issues – Data

## Ag Data Transparent

- In 2014, American Farm Bureau Federation (AFBF) observed that many of its farmer-members were concerned about the variety of new ag data products that were arriving on the market.

- To address concerns, AFBF hosted a series of meetings with farm groups and equipment manufacturers such as the American Soybean Association, National Corn Growers, John Deere, CNH, and others.

- Group drafted *The Privacy and Security Principles for Farm Data*, or what today we call ag data's "*Core Principles*."

  - These Core Principles represented basic guidelines that ag tech providers should be following when collecting, using, storing, and transferring farmers' ag data. After publishing, 37 different companies signed onto the Core Principles, pledging to incorporate them into their contracts with farmers.

# Ag Data Core Principles

- Education
- Ownership of data
- Collection
- Access and Control
- Notice
- Transparency and Consistency
- Choice

- Portability
- Key Terms and Definitions
- Disclosure
- Data Retention
- Termination
- Unlawful and Anticompetitive Activities
- Liability Safeguards

# Developing Policy Issues – Drones & AI

- Drones use is quickly becoming the next frontier in agriculture.
- Drones can be used for everything from scouting for weeds to spraying them.
- AI can be paired with drones to be adaptive, and learn the biology of crops and field.
  - Provide real time data, accomplishing tasks in minutes that would take a person hours
  - Save money by covering areas more efficiently and more accurately than a human
  - Monitor Soil Moisture to develop irrigation strategies
  - Drones can use AI to provide data driven insights to real time problems.

# Developing Policy Issues – Drones & AI

- Can AI really provide real time solutions to actual problems in the field?
  - Weeds
  - Diseases
  - Livestock

- Is AI derived data safe and secure?
  - Global Market Share
  - How does a farmer know their data is safe?

Questions?