Statement of the American Farm Bureau Federation

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SENATE COMMERCE, SCIENCE, TRANSPORTATION COMMITTEE
SUBCOMMITTEE ON AVIATION OPERATIONS, SAFETY, AND SECURITY

FOR THE HEARING ON
UNMANNED AIRCRAFT SYSTEMS: KEY CONSIDERATIONS REGARDING SAFETY, INNOVATION, ECONOMIC IMPACT, AND PRIVACY

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The American Farm Bureau Federation (Farm Bureau) is the nation's largest general farm organization, representing agricultural producers of nearly every type of crop and livestock across all 50 states and Puerto Rico. We appreciate the opportunity to submit a statement to the Subcommittee on Aviation Operations, Safety, and Security for this hearing on Unmanned Aircraft Systems: Key Considerations Regarding Safety, Innovation, Economic Impact, and Privacy.

Farm Bureau supports the use of unmanned aircraft systems (UAS) as another tool for farmers and ranchers to use in managing their crops and livestock and making important business decisions. A farmer faces daily challenges that can affect the farmer's yield, environmental conditions on the farmer's property and, ultimately, the economic viability of the farm. Farmers rely on accurate data to make these decisions and the use of UAS adds a valuable and accurate tool for the farmer in making optimal decisions to maximize return on farming operations.

It has become widely accepted that the introduction of UAS into the commercial industry will begin with American agriculture. The primary reason American agriculture is viewed as the pioneer industry to use UAS for a commercial purpose is that the airspace above the fields used in agriculture is low risk, and many of the fields are located in remote areas.

Farm Bureau sees another reason American agriculture will pioneer this effort. America's farmers and ranchers embrace technology that allows their farming businesses to be more efficient, economical and environmentally friendly. American agriculture continues to evolve, and today's farmers and ranchers are using precision agricultural techniques to make business decisions. These decisions can impact the amount of fertilizer a farmer needs to purchase and apply to the field; the amount of water needed to sustain the crop; and the amount and type of herbicides or pesticides the farmer may need to apply. These are only a few examples of the business decisions a farmer makes on a daily basis to achieve optimal yield, lower environmental impact and maximize profits.

Farmers and ranchers are excited to see the transformation of a hobbyist activity into the newest tool for precision agriculture. The U.S. Department of Agriculture defines precision agriculture 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."[1] This definition encompasses the purpose of UAS within the agriculture industry.

Farm Bureau sees the benefit of UAS through their ability to provide detailed scouting information on weed emergence, insect infestations and potential nutrient shortages. This valuable information allows the farmer to catch these threats before they develop into significant and catastrophic problems. By addressing threats quickly, the farmer has a greater likelihood of being able to respond appropriately so as to optimize yields.

The imagery from UAS also allows the farmer to spot-treat sections of the fields as opposed to watering or spraying the entire field. The quicker a farmer can discover a potential threat, the

[1] USDA, Natural Resources Conservation Service, "Precision Agriculture: NRCS Support for Emerging Technologies." http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1043474.pdf. June 2007.

quicker the farmer can address the issue. Images from UAS allow the farmer to identify the specific location where a specific treatment – be it fertilizer, water, pesticides or herbicides – is necessary; in doing so, the farmer can eliminate the need to use these applications more broadly across the entire field. By spot-treating threats to the crop, the farmer not only lowers the cost of treatment but also has the potential of lowering the environmental impact by minimizing application.

Farm Bureau is glad to see the Federal Aviation Administration (FAA) introduce its notice of proposed rulemaking for small-UAS. Farm Bureau is in the process of developing its comments to the FAA regarding the proposed rule. It is our hope that farmers and ranchers are able to secure the rights through this process to use UAS as part of their precision agricultural systems. That will allow them to scout fields and will serve as another tactic at their disposal to limit the use of agricultural inputs to only those areas of the field that require treatment. That will be good for the environment as we will be able to grow more with less. Many farmers will adopt this technology as yet another way to live up to the promise of continuous improvement in food production.

While Farm Bureau supports this new technology and the potential opportunities it offers for farmers and ranchers, Farm Bureau is also concerned about the data collected from UAS and the privacy and security of that data.

Even if an individual operator follows all the applicable rules, regulations, and best management practices in his or her farming operation, there is still concern that regulatory agencies or one of the numerous environmental organizations that unnecessarily targets agriculture might gain access to individual farm data through subpoenas. While a farmer's pesticide or biotech seed usage may be a necessary and accepted practice, it could also be politically unpopular with certain groups.

The biggest fear that farmers face in data collection is government accessing their data and using it against them.

Questions abound within the agricultural community about "who owns and controls the data." If a farmer contracts with a company authorized to fly UAS, does the farmer own all the data from that UAS or is it shared by both the contractor and the farmer? In the case of a farm on rented ground, does the tenant or the landlord own the data?

Farm Bureau supports the use of UAS and believes it will be an important addition to farmers' management toolbox, but it is critical that the data remain under the ownership and control of the farmer and is not available to government agencies or others without permission.