



## **Drones in Agriculture Policy Development 2013**

### **Issue:**

In 2015, the Federal Aviation Administration (FAA) will be allowing commercial and private Unmanned Aerial Vehicles (UAV) to use the National Airspace System. The FAA is opening the nation's airspace to more commonly known as drones, with a Congressional mandate. Drones are an emerging market in the nation's economy and it is estimated by the Association for Unmanned Vehicle Systems International (AUVSI) that \$10 billion are lost every year commercial drone sales are delayed. It is speculated one of the biggest markets for drones would be in agriculture, reducing input costs for agricultural operations.

Many citizens have privacy concerns about drones. A majority of these concerns are focused on government owned drones used for surveillance. Commercial and private drones are raising new concerns. The minimum altitude of flight for the drones would be approximately 500 feet in most areas, well within the operational range of modern recording devices. Citizens are concerned their neighbors or businesses could use drones to view their property without consent. Many are worried about the privacy and trespassing implications from these incidents. Agricultural operations are concerned about drones operating near their facilities because of the trespassing and security implications.

### **Questions:**

1. What regulations are necessary to balance economic activity with private property rights?
2. Should trespassing include airspace above private property?
3. What could be done to integrate drones into Tennessee Agriculture?

### **Background:**

Congress pushed for an opening of domestic airspace to drones. The new regulations are still being crafted and they will go into effect in 2015. Commercial drone use is currently illegal. Agriculture is one of the largest potential markets for drones. Drone manufacturers want to focus on precision agriculture. Drones could be used to scan fields with programs designed to map crop damage and where fertilizer or chemicals need to be applied. Instead of manned crop dusters, UAVs could be used to apply chemicals to crops for thousands of dollars less. Drones could even be used for monitoring cattle herds and providing security for the farm. These aerial vehicles could have a drastic impact on agriculture nationally by reducing costs.

AUVSI performed a study concerning the impact of drones on the American economy. AUVSI estimates that 100,000 jobs would be created in America by 2025 by developing the drone market and account for \$82 billion in economic activity. In 2015, AUVSI expects Tennessee to realize an impact of \$18.72 million generated by drone use and manufacturing. Approximately \$17.25 million would be in the agricultural sector. By 2025, AUVSI estimates the total economic impact of drones on the Tennessee economy to be \$82.97 million.

Drones could be big business for the state. However, privacy concerns still need to be addressed. Domestic airspace starts around 500 feet, and it extends over the majority of the nation. A drone could record activity on your property without your knowledge, a fact that concerns many people. This type of uncertainty in private property rights scares citizens and business owners.

An example of these concerns involves an incident that recently occurred near Garden City, Kansas. A freelance photographer was using a paraglider to fly over a feedlot. This raised the attention of the feedlot owner who was concerned about security. He called the police and the paraglider was arrested for trespassing, not for flying over the owner's property without consent, but for launching from private property without permission. This type of activity by unscrupulous individuals raises a legitimate privacy concern about the definition of trespassing in the age of drones.

A 2013 Tennessee law (SB796 Beavers – HB591 Van Huss) designed to protect personal liberties allows drones used in law enforcement to only search for a fugitive or a missing person, in monitoring a hostage situation or when a judge issues a search warrant authorizing them. Any information gathered otherwise by a drone in law enforcement cannot be used in court and must be destroyed within 24 hours, the bill says. Drones can also be used "to protect life and property during crowd monitoring situations".

**Policy:**

None.