

**Guardian Agriculture's Opposition to H.B. 5246 – Digital Electronics Right to Repair
House Corporations Committee**

Submitted by Matt Beckwith

VP of Business Development and Regulatory Affairs, Guardian Agriculture
matt.beckwith@guardian.ag

Via Electronic Mail: HouseCorporations@rilegislature.gov

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Testimony Opposing H.B. 5246 – Right to Repair Legislation

Dear Chair Solomon, and Honorable Committee Members:

My name is Matt Beckwith, and I represent Guardian Agriculture. Based in Massachusetts, we are pioneers in **agricultural unmanned aircraft systems (UAS) for use in agriculture spraying**. Our team of 50 is dedicated to revolutionizing sustainable agricultural practices by building a large UAS for spraying in agriculture in order to make agricultural aviation safer for pilots.

I am here to express our strong opposition to H.B. 5246, the Right to Repair Farm Equipment legislation due to concerns about regulatory confusion and significant safety risks to operators, repair people, and the public at large.

We have **three primary concerns with this legislation.**

- 1. It creates a confusing and overlapping regulatory landscape between national and state jurisdictions.**
- 2. The rights it grants would create safety hazards.**
- 3. The absence of cybersecurity standards exposes connected farm equipment to a bad actor.**

Company Background and Concerns

Guardian Agriculture is an organization built by makers and tinkerers who are always repairing things. Instead of going home at the end of the day our employees will wheel their cars into the machine shop. At an early age on a Nebraska farm, I learned that duct tape and baling wire could fix nearly anything - but that was before electrification and software made repairs perilous for the repairperson and future operators.

Guardian produces [large-scale \(UAS\)](#) used for seeding, spraying, and fertilizer application in the cultivation of agricultural crops. We fly as unmanned aircraft systems in National Airspace. As such, our aircraft are governed by the Federal Aviation Administration (FAA). Virtually every aspect of our aircraft's design, construction, maintenance, repair, and operation falls within the

FAA's regulatory purview of the National Airspace Systems (NAS). As an aviation company, our obligation first and foremost is to the safety of our operators and the public at large. We actively collaborate with the FAA through an Integration Partnership Agreement to develop sensible and safe regulations for emerging UAS technology. Our drones are designed, built, and maintained to perform at exacting safety standards.

Overlapping Regulations

We operate under 14 CFR Part 11 and the Congressional authority found in [Special Authority for Certain Unmanned Systems, 49 U.S.C. §44807](#), which grants the Secretary of Transportation the authority to use a risk-based approach to determine if certain unmanned aircraft systems may operate safely in the NAS on a case-by-case basis.

To provide a sense of scale, Guardian's [44807 exemption](#) has a mandated maximum takeoff weight of over 645 pounds. The high-voltage energy storage system has 140 DC volts and supercharges three times faster than a Tesla supercharger. Our 'small' propeller is almost 6 feet long, longer than the propeller on many crewed aircraft. It spins at 2500 RPM, and there are four of them. Safety inspections are absolutely critical to ensuring that an aircraft can operate safely and as expected. Untested alternations to the hardware can have dangerous and unintended consequences to software-controlled operations. The inability to ensure that all hardware and software are in a functional state has the potential to lead to failures capable of causing significant bodily harm.

H.B. 5246 has an overly broad definition of farm equipment, which would include drones 'carrying out activities on farms.' It, therefore, squarely overlaps with existing FAA regulations, which govern diagnostics, maintenance, and repair of UAS. At best, this creates regulatory confusion as it comes in conflict with the FAA's preemption doctrine. At worst, separate state and federal laws regulating safety would undermine the FAA's stringent safety standards. America has the good fortune of an aviation administrator with an unparalleled global safety record. This is in no small part because the FAA sets standards for the training and certifications required for a repair person, not merely requiring that they be an 'independent repair provider, or to the owner of electronics-enabled agricultural equipment,' as stipulated in H.B. 5246. **We strongly believe that the FAA, and not individual states, should govern aircraft repair standards.**

Safety Concerns

Apart from our conviction that the FAA is the appropriate regulator of aviation, we have fundamental safety concerns about the implications of this bill. Safe aircraft repair and maintenance require not just parts and tools, but training and expertise. All the following repair activities, which now require specialized training would become a 'right' under H.B. 5246:

- Safety inspection of a propeller
- Recalibration of collision avoidance radar

- Rewiring avionics equipment to permit higher speed

Yet, without the appropriate training approved by the OEM, each of these ‘rights’ would be contrary to FAA policy. Any of these repairs or modifications could lead to an entirely avoidable catastrophe. A small shift in the center of gravity or the positioning of a sensor could upset the overall balance and flight dynamics of the aircraft and send it careening off course.

In addition to flight safety, the proposed legislation would create electrical hazards. Our 140-volt DC battery exceeds [NFPA 70e](#), the OSHA standard for electrical safety, by 2.5 times. Nothing in this law would require the repair person to be trained to this standard or have the requisite safety equipment. It would be unconscionable for a grant of repair rights that would put the fine citizens of Rhode Island in danger.

Need for Cybersecurity Provisions

Software diagnostic tools are not like a set of wrenches that benignly sit in a shop when not in use. Modern farm equipment - from tractors and combines to drones - are connected pieces of software-enabled hardware. This is a powerful tool for autonomy and efficiency, but in the wrong hands poses a liability. The absence of cybersecurity standards in combination with this Bill’s requirement that the OEM provide repair shops with software diagnostic tools creates unintended hazards that extend far beyond an individual piece of equipment.

Modern farm equipment relies on advanced, software-driven diagnostic tools that require specialized expertise. Granting unrestricted access to these tools creates significant cybersecurity risks. Our software’s security would be only as strong as the least careful aircraft owner with access to these diagnostic tools.

The risks of unauthorized access to critical software are clear. When [American-made farm equipment was stolen from Ukraine](#), John Deere remotely disabled it using embedded software protections, preventing its misuse. If manufacturers are forced to share powerful diagnostic tools with unregulated repair shops that lack proper cybersecurity measures, it would bring critical source code one step closer to [hostile actors actively seeking to exploit vulnerabilities in connected devices](#).

Any right-to-repair legislation must include minimum cybersecurity standards to protect American farm equipment—part of our critical infrastructure—from being compromised or disabled.

Conclusion

As we navigate the intersection of technology and agriculture, it is imperative to prioritize safety, regulatory clarity, and operational integrity. H.B. 5246, while aiming to empower individuals, has the unintended consequence of putting owners, repair people, and the public at large in physical danger. We urge the committee to reconsider the legislation and put in provisions that explicitly



Kiwi Technologies
D.B.A. Guardian Agriculture
23r Rainin Road, Woburn, MA 01801
617-870-3000
info@guardian.ag

respect FAA preemption authority, do not put untrained repair personnel in harm's way, and do not create a cyber vulnerability that could shut down the equipment America uses to produce its food. Guardian Agriculture is committed to working with all stakeholders to ensure that innovation in agricultural technology advances safely and responsibly.

Thank you for the opportunity to share our perspective on this crucial issue. We welcome any questions.

Matt Beckwith
VP of Business Development & Regulatory Affairs
Matt.beckwith@guardian.ag