

FEEDBACK FROM THE AMERICAN SPRAY DRONE COALITION REGARDING THE BIS ICTS RULE-MAKING FOR UAS

December 19, 2025

The American Spray Drone Coalition (ASDC) appreciates the opportunity to provide comments to the Department of Commerce's Bureau of Industry and Security (BIS) regarding the ICTS rule-making on UAS. We understand the critical importance of a robust and secure domestic industrial base, and we share the Department's interest in ensuring the security and resilience of supply chains for vital technologies.

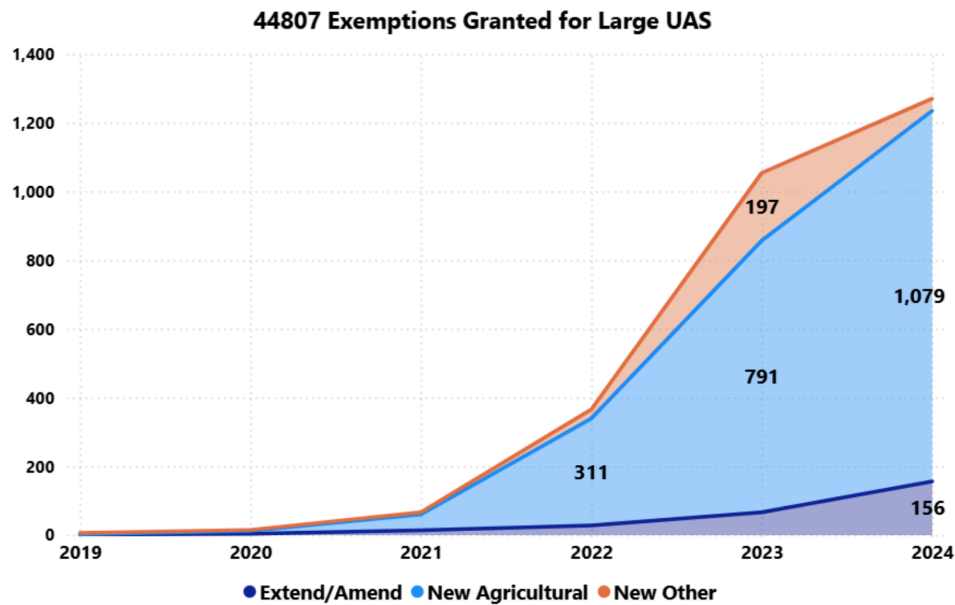
ASDC represents a coalition of agricultural drone operators, manufacturers, distributors, and industry stakeholders who rely on unmanned aircraft systems for precision agriculture, crop protection, and efficiency in modern farming operations. Because 10.3 million acres of farmland was treated by spray drones in 2024, it's vital that American farmers retain access to affordable, quality drones while balancing security and a transition to options made in the USA or by U.S. allies. Policies limiting drone access based on country of origin remove innovative technology while threatening our farmers, food security, and global competitiveness. ASDC's feedback on this rule-making draws from our members' experience standing up U.S. spray drone manufacturing, and selling, supporting, and operating spray drones. ASDC members are investing hundreds of millions of dollars into ramping up U.S. production capacity.

We believe it is crucial for this rule-making to consider the diverse and essential roles that UAS play across various sectors, particularly in agriculture. While national security considerations are paramount, policies defined in this rule-making must not inadvertently harm critical domestic industries that depend on reliable access to UAS technology.

Key Considerations for the Department of Commerce

ASDC urges the Department to carefully consider the following points as it finalizes its rule-making:

Current and Projected Demand for Agricultural Spray Drones: The demand for agricultural spray drones in the United States is rapidly increasing. These systems offer unparalleled precision, reducing chemical runoff, optimizing resource use, and improving worker safety. In 2024, an estimated 10.3 million acres were treated by drone, according to a survey conducted by the American Spray Drone Coalition. In 2025, we project that approximately \$1 billion will be spent on spray drones and related services in the U.S. Domestic production alone cannot currently meet this burgeoning demand, and projections indicate continued growth as more farmers adopt these technologies. Restricting access to a diverse range of reliable UAS could severely hamper the modernization and competitiveness of American agriculture.



The FAA Aerospace Forecast 2025-2045 reported that the 44807 exemption grants required for spray drone operations in the U.S. saw a 115% CAGR over the last 4 years.¹ Over that same

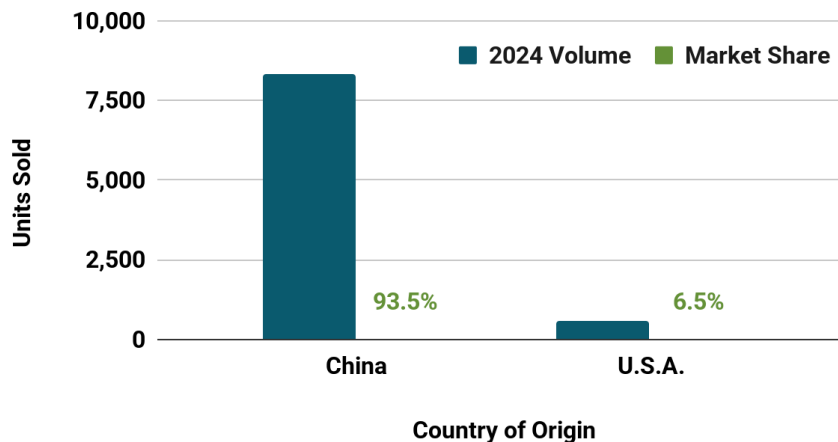
¹ "FAA Aerospace Forecast FY 2025-2045: Emerging Aviation Entrants: Unmanned Aircraft Systems and Advanced Air Mobility." *FAA Aerospace Forecast*. https://www.faa.gov/data_research/aviation/aerospace_forecasts/2025_uas_and_aam_full_document.pdf.

period of time, registered agricultural drones over 55lbs grew at a compound annual growth rate of 133%, outpacing 44807 exemption growth. This indicates that the number of drones each FAA approved operator owns is also increasing.

In 2024, 2,198 agricultural spray drones were registered in the U.S. By contrast, in 2024 Brazil, a country with similar agricultural exports to the U.S. (\$164B vs \$176B, respectively in 2024) had 7,832 spray drones, according to Sindag (National Syndicate of Agricultural Aviation Companies).² To remain competitive globally, our farmers need access to leading edge technologies.

Domestic Production Capacity and Foreign Supply Chains: The agricultural UAS industry in the United States is heavily dependent on manufacturers that supply reliable and affordable drone technology. Currently, a significant portion of agricultural drones used for spraying and precision application are sourced from global suppliers, particularly those based in China. These manufacturers have established supply chains that ensure access to high-quality components, advanced software, and rapid scalability. Restricting access to these drones would lead to severe supply chain disruptions, leaving operators without viable alternatives in the short term. The domestic supply chain for agricultural drones remains underdeveloped, with limited production capacity and significantly higher costs.

2024 Spray Drone Sales - U.S. Market



² "Brazil: Aerial Spraying Reaches BRL 8 Billion; Expected to Grow 25% by 2028." n.d. Grainews. <https://news.agropages.com/News/NewsDetail---54433.htm>

China-manufactured drones currently dominate the U.S. agricultural drone market. In 2024, 93.5% of the spray drones sold in the U.S. came from China. This data was compiled by ASDC using a combination of first hand interviews with manufacturers and distributors as well as through public statements manufacturers have made. Manufacturers have requested their data not be reported directly, and therefore it is grouped by country of origin.

The proposed restrictions would create an immediate void in supply, leading to operational delays, reduced efficiency, and increased costs for farmers who rely on this technology to optimize crop yields and reduce chemical waste. U.S. companies would require years to build comparable infrastructure, research and development capabilities, and production capacity. The transition to completely remove use of Chinese drones would take 5-10 years with current economic realities. Most companies trying to bring a U.S. drone to market follow a phased approach, requiring a multi-year process involving assembling drones in the U.S., diversifying the supply chain, and integrating U.S.-made components. Component supply must be secured at least six months in advance due to the seasonal nature of agriculture, meaning an immediate restriction would severely disrupt this timeline. Beyond that, for the next several years, many components for lower risk applications are still going to need to come from China.

Concentration of Imports and Associated Risks: We recognize the potential risks associated with over-reliance on a small number of foreign suppliers or nations, particularly concerning national security. ASDC advocates for diversifying the supply chain where feasible. However, any measures taken should carefully weigh the risks against the immediate operational needs of critical sectors like agriculture. It is important to distinguish between UAS used for sensitive national security applications and those employed in commercial sectors, which may have different risk profiles. Currently, Chinese-manufactured drones account for 93% of the agricultural spray drone market. We recommend focusing current U.S. drone manufacturing capacity on higher risk sectors while we expand our domestic manufacturing capacity and take steps to secure Chinese-manufactured drones through known software cyber-security methods such as firewalls built by U.S. based companies.

Impact of Foreign Practices on Competitiveness: We are concerned about any unfair trade practices or state-sponsored overproduction that may negatively impact the competitiveness of the American UAS industry. We support measures that level the playing field for domestic manufacturers. However, it's vital to ensure that such measures do not lead to a significant increase in prices or a decrease in the availability of essential agricultural tools, which could ultimately harm American farmers and consumers. In analyzing FAA-approved spray drones on

the market, we've found the average price of a USA-made spray drone is \$50,591, compared to \$22,815 for a China-made drone, representing a price ratio of 2.2. For high-productivity drones (capacity > 30L), the average price for USA-made is \$67,050 versus \$24,813 for China-made, a ratio of 2.7. An ASDC spray drone industry survey for 2024 found that the average business using spray drones employs 2 to 5 people. Spray drone businesses are small businesses, often able to start earning a profit on their drone within 1.5 years. Using a drone 2.7 times more expensive means they couldn't turn a profit for over 4 years. The growth of U.S. alternatives to Chinese drones must foster the competitive environment that results in good outcomes for the American consumer. Competition increases the downward pressure on price and increases pressure on quality and innovation.

Weaponization Potential: While the potential for foreign nations or companies to weaponize the capabilities of foreign-built UAS or weaponize control over UAS supplies is a serious national security concern, it is imperative to differentiate between agricultural spray drones and UAS designed for military or surveillance purposes. Agricultural drones are typically designed for specific spraying tasks, often with limited range and payload capacity, making their "weaponization" in a national security context less direct than other UAS categories. Spray drones typically fly for 10 to 15 minutes at a time, must have batteries manually changed by operators, and require their payload to be manually mixed and loaded. Spray drones are a highly regulated industry. The FAA requires the operator to have a 44807 exemption, Part 137 operating certificate, and class 3 medical certificate. States require operators to have commercial pesticide applicators and business licenses. Spray drones themselves are no more of a threat to weaponization than any other method of pesticide application. The FAA could increase the rate of compliance by making changes to the 44807 exemption process. For example, they could remove the requirement to have a registered UAS when petitioning for a 44807 exemption, and require the registration only when applying for the Part 137 Agricultural UAS Certificate.

Additionally, China could weaponize its UAS supply chain by suddenly cutting off the U.S. from its drones and components. Rule-making from the Department of Commerce that forces a sudden cutoff has the same devastating effect. We need to transition to domestic options, but we need time for those options and their components to grow and mature.

Feasibility of Increasing Domestic Capacity: Increasing domestic capacity for UAS and their parts and components is a long-term goal that ASDC supports. However, this will require significant investment, research and development, and time. For the 2025 agricultural growing

season, only one of the three U.S. companies that offered a spray drone model with capacity >30L, a threshold of good acres/hour productivity, had options readily available on the commercial market.

DJI's spray drone sales in the U.S. dropped by 95% from 2024 to 2025 due to Uyghur Forced Labor Prevention Act (UFLPA) enforcement. They previously accounted for 70-90% of spray drone sales in the US. In the wake of their absence, farmers have made due with older models while new entrants scramble to get to market. The number 2 and number 3 manufacturers after DJI are also Chinese and are able to come to the US market quickly with enough volume and distribution to pick up part of the demand left behind by DJI. Additional U.S. based manufacturers are attempting to come to market but are only able to do so by leveraging Chinese components.

Any immediate trade actions must consider the current limitations of domestic production and allow for a strategic transition period to avoid disrupting critical agricultural operations.

Incentives for domestic manufacturing, rather than immediate import restrictions, may be a more effective path forward.

Impact of Current Trade Policies and Necessity of Additional Measures: ASDC urges the Department to consider the broader economic impact of any potential tariffs or quotas on UAS imports. The removal of widely used agricultural drones from the market would have far-reaching consequences. Without reliable drone technology, farmers and agricultural service providers would have to rely on traditional spraying methods and their associated risks: greater chemical use, higher environmental impact, and higher operator risk (piloted agricultural aviation is the greatest source of aviation related deaths in the United States). Additionally, small and mid-sized farms, which often lack the resources to invest in costly alternatives, would be disproportionately affected, reducing their competitiveness in the market. Furthermore, \$215 million of economic activity was generated in rural communities from spray drone businesses in 2024. This figure does not account for drone sales, only services rendered by farmers and service suppliers. Such measures could significantly increase the cost of essential equipment for American farmers, making them less competitive globally and potentially hindering agricultural innovation.

We believe a nuanced approach is required, one that carefully assesses the national security benefits against the potential economic harm to vital domestic industries. We encourage targeted strategies that promote domestic innovation and production without stifling the growth of sectors reliant on imported UAS. Phase-in periods are crucial to allow the UAS supply chain

players time to adapt to restrictions and ramp up capacity and procurement. We recommend prioritizing U.S.-made drones for the most sensitive applications such as military, public safety, and critical infrastructure inspection, and for other lower risk sectors like agriculture to implement cybersecurity safeguards to mitigate risk. These safeguards could include firewalls, U.S.-based hosting of software-as-a-service platforms, and strict data access policies. These kinds of products are already available from companies such as DroneDeploy, DroneSense, and Flytbase and can be adapted to agricultural spray drones.

Software Applications: There is a category of software application that helps spray drone operators run their businesses, leveraging flight log files for billing, regulatory compliance at the state and federal levels, and generating deliverables for farm operations. As long as the drone manufacturer makes these log files accessible, U.S.-based software developers can continue to provide solutions that improve the precision agriculture ecosystem, while keeping data generated in the U.S. inside the U.S.. Business-related software applications are commonly delivered via the software as a service subscription-based business model.

Conclusion

ASDC strongly urges policymakers to consider the significant impact that severe restrictions on foreign-manufactured UAS would have on the agriculture industry. We encourage a balanced approach that prioritizes security concerns while ensuring the continued viability of the agricultural drone sector. This could include extended transition periods, adherence to cyber-security standards, investment in domestic alternatives, and exemptions for agricultural use where no viable domestic options capable of sufficient scale exist. We appreciate the opportunity to provide this input and look forward to further engagement on this critical issue.

Sincerely,

The American Spray Drone Coalition

