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NAAA eNewsletter

NAAA Follows Up Its Deep Aviation Safety Concerns with the FAA Drone BVLOS ARC by Entreating DOT Secretary Buttigieg to Not Compromise Low-Altitude Ag Pilots' Lives

Following up on a letter, testimony and other advocacy efforts to the FAA since last spring, this week, NAAA followed up with a separate letter to Transportation Secretary Pete Buttigieg expressing the aerial application industry's serious concerns about the FAA considering promulgating via a proposed rulemaking many dangerous recommendations detrimental to low-altitude aviation safety from the FAA's Unmanned Aircraft Systems (UAS) Beyond Visual Line of Sight (BVLOS) Aviation Rulemaking Committee's (ARC) report published earlier this year.

In the letter to Buttigieg, NAAA included statistics on the great value aerial application provides to agriculture, forestry and public health. It also explained the severe aviation risks that UAS flying BVLOS in the 10- to 500-foot AGL airspace pose to manned, low-altitude aircraft flying in the same airspace, particularly when the UAS may weigh up to 1,320 pounds (about the size and speed of a Piper J3 Cub), no longer be required to provide the right of way if manned aircraft are not equipped with ADS-B technology, and be permitted to fly BVLOS without giving right of way or being ADS-B technology equipped when operating in "Shielded Areas."

The ARC's definition of a shielded area is a "volume of airspace that includes 100 feet above the vertical extent of an obstacle or critical infrastructure and is within 100 feet of the lateral extent of the same obstacle or critical infrastructure…" The ARC defined an obstacle as "any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used and any permanent or temporary apparatus." In this volume of airspace, UAS do not need to have ADS-B or other means to detect manned aircraft (MA) because, according to the ARC report, manned aircraft do not operate in this airspace. NAAA responded in the letter stating, "This claim is dumbfoundingly inaccurate … it is the exact space that aerial applicators operate in when performing their mission treating cropland bordered by trees, utility poles, within 100 feet AGL and the like." Included in the letter was a GPS printout satellite map of manned aircraft swaths to cropland surrounded by obstacles (see illustration in the letter by clicking **here**).

NAAA also stated that other manned aircraft besides agricultural aircraft also operate in the 500-foot AGL airspace or below to properly perform their missions, such as emergency medical services, law enforcement, fire suppression, wildlife surveys, powerline patrol and others. These operations occur in a task-saturated environment for pilots due to the numerous existing obstructions, including wires, towers and terrain. BVLOS operations would add to the saturation by concentrating more aircraft in that airspace. Moreover, NAAA stated that the current relatively small size of UAS makes visual detection nearly impossible and referenced the 2015 Colorado Agricultural Aviation Association tests conducted to see if manned agricultural aircraft, both fixed-wing and rotor, could locate a drone over a field. The results were that of four fixed-wing aircraft pilots, only one could locate the UAS and could only do so for a few seconds. The only helicopter, which included a pilot and a visual observer, found the UAS but reported that it was extremely difficult to maintain visual contact. NAAA followed up the point to make the case that it would be perilous for drones not to always be mandated to give way to manned aircraft by stating that for "a low-altitude manned aircraft to visually track a darting … [UAS] while also avoiding ground affixed objects and performing either a policing, application, search, and rescue, etc. task is impossible and a safety hazard."

An FAA ARC makes recommendations, not policy. The agency takes into account ARC reports and recommendations before proceeding with draft policy. The recommendations from this FAA UAS BVLOS ARC were not unanimously supported. Helicopter Association International, the General Aviation Manufacturers Association, Aircraft Owners & Pilots Association and Air Line Pilots Association voted against the ARC's recommendations and were just a few of the manned aircraft organizations asked to serve on the FAA UAS BVLOS ARC. NAAA served on the FAA UAS Remote ID ARC in 2017 and co-signed a minority report that urged the agency to require drones from 0.5 pounds or greater to be equipped with remote ID (RID) technology. That requirement was ultimately included in the final RID rule. NAAA will continue to follow up on this most important issue to protect low-altitude manned aircraft from drone policies dangerous to the safety of manned aircraft.

Downstown Aero Crop Service Co-Founder Dick Nixholm Passes Away at 95

NAAA is saddened to report that Richard H. "Dick" Nixholm, one of the founding members of the National Agricultural Aviation Association in 1966, passed away Nov. 28 at the age of 95.

Dick was born Sept. 23, 1927, in Yonkers, New York, to Hilmer Harold Nixholm and Anna Nixholm. In 1937, when he was 10, Dick's family bought a working dairy farm in Pittsgrove, New Jersey, where he helped while attending grade school and high school. Dick graduated from Vineland High School in 1945. Afterward, he enlisted in the Army and was assigned to the 10th Mountain Division based at Camp Hill in Leadville, Colorado. While there, he became part of the newly formed "Ski Soldiers" and made the rank of Corporal. Although the war ended before making it overseas, Dick was honorably discharged for his service.

Dick returned to the dairy farm to start managing it but had an itch to learn how to fly. He started taking lessons at Vineland-Downstown Airport, where he received his private pilot's, helicopter, commercial and instructor's licenses. He began teaching people to fly under the G.I. Bill while still managing the farm.

Pictured from L-R, Downstown Aero Crop Service co-founder Dick Nixholm, Curt Nixholm, his son, and Dick's fellow co-founder

and business partner, Peter Cugino.

In 1953, Dick decided to sell off the cows and dairy business so he could fly full-time, learning how to “crop dust” at the airport, where he met his late business partner Peter Cugino. That was when they purchased the airport and the “crop dusting” business to form Downstown Aero Crop Service in Vineland, New Jersey, where they were partners for over 50 years. As business flourished, Dick managed the aviation and agricultural side of the operation while Pete ran the grounds and aircraft maintenance. Over the years, they operated more than 10 aircraft. Dick loved to meet with farmers to discuss issues with their crops and did so for many years, becoming a self-made expert in vegetable crops. He also mentored many new pilots in agricultural aviation (Dick always disliked the term “crop duster”).

Dick accumulated over 20,000 hours of flight time, with 17,000 of those hours “all under 10 feet,” as he would call it. From flying Piper Cub Dusters to Stearmans and onto his beloved 450-horsepower Ag-Cat, he always had a love for flying. From fighting wildfires and spraying mosquitos to treating vegetables, cranberries, and blueberries, Dick did it all.

He was the charter president of the Northeast Agricultural Aviation Association, formed in 1966, and was on the original committee that formed the National Agricultural Aviation Association in Washington, D.C. He was also a charter member of the Half-a-Hundred Club, a group that was originally populated with about 50 agricultural aviation operators from across the country.

In 1986, Dick and his business partner Pete were awarded NAAA’s William O. Marsh Safety Award, which recognizes achievements in safety and education. Dick was most proud of this award, as he always promoted safe flying in the agricultural aviation industry. His final aerial spray application before his retirement was on Oct. 10, 2005, at the age of 78.

For many years, Dick would spend the winter months at his second home in Jupiter, Florida. He was an avid world traveler who loved to deep sea fish, spend time with his grandchildren, and, most of all, entertain his family and friends, who loved his ability to add humor into any conversation with his quick wit.

Dick was preceded in death by his first wife, Winifred B. Nixholm (nee Becker), baby daughter Beth Ann, baby son Scott, and his second wife, Ruth Nixholm (nee Christman).

He is survived by his son, Curtis Nixholm, and daughter-in-law, Shari Nixholm (nee Masatani), grandchildren Jessica Nixholm, Sean Nixholm and Kylie Nixholm, and favorite grand-dog Quincy the Chiweenie of Pittsgrove, as well as stepdaughter Janis Owens and her husband, Glen, of Pittsgrove, step-granddaughter Shannon Groome and her husband, Jim, great-grandson Avery and his wife Brittany Fralick and son Bryson of Millville, and great-grandson Logan Groome of the U.S. Navy.

In lieu of flowers, the family requests donations in Dick’s name to:

> **National Agricultural Aviation Research and Education Foundation**
> **c/o NAAA**
> **1440 Duke Street**
> **Alexandria, VA 22314**

NAAA extends its sincere condolences to Curt Nixholm and his entire family in their time of grief over the passing of family patriarch Dick Nixholm.

NAAA Urges the FAA to Prioritize Safety, Suspend BVLOS Waiver Approvals

Last week NAAA submitted a letter to FAA Administrator Billy Nolen registering serious concerns about the sharp uptick in Part 107.31 waivers issued for unmanned aircraft (UA) to operate beyond visual line of sight (BVLOS). Many of these waivers permit BVLOS operations where the remote pilot in command (RPIC) or the visual observer (VO) can monitor the surrounding airspace of the UA in flight but cannot see the UA itself.

In a recent two-month span, from Sept. 1 to Nov. 3, there were 16 such waivers issued, while only 17 were issued the entire year in 2020. This represents a substantial increase in BVLOS waivers without any required detect-and-avoid technology.

In the letter, NAAA asserts that the provisions of these waivers compromise the safety of manned aviation in low-altitude airspace. Put plainly, if an RPIC or VO cannot see the UA due to terrain, structures or general visibility problems, they may not be able to see low-flying agricultural aircraft. Supporting evidence for this was cited from the Mississippi State University’s Raspet Flight Research Laboratory, explaining that an agricultural aircraft making application passes and turns (at a combined average of 38 feet AGL) may escape the notice of an RPIC or VO scanning for traffic.

Most of these waivers also include a requirement for high-visibility painting and/or strobes to increase visibility. However, if these measures were adequate, it would not be necessary to issue the waiver in the first place, as the UA could be seen by its own RPIC and/or VO.

NAAA concluded the letter by reiterating the need to suspend the issuance of Part 107.31 waivers until adequate traffic management systems, such as detect-and-avoid technologies, are developed and approved. Allowing BVLOS operations without these technologies poses a significant safety threat to the agricultural aviation industry and all other manned aviation operating in low-altitude airspace. You can read the full letter **here**.

EPA Approves Revised Pesticide Applicator Certification Plans for 13 State and Federal Agencies

Last week the EPA approved pesticide applicator certification plans for six states, two U.S. territories and five federal agencies. The approved plans comply with the 2017 Certification of Pesticide Applicators (CPA) final rule, which established stronger standards for people who apply restricted-use pesticides (RUPs), including aerial applicators. The rule required that agencies with existing certification plans submit proposed modifications to comply with these new standards. The new standards included the establishment of an aerial application category that would require unique continuing education for that specific form of application.

Existing certification plans for state, territory and tribal authorities will remain in effect until **Nov. 4, 2023**, unless the EPA approved their proposed plan modifications.

The six states and two territories, as well as their respective lead agencies responsible for enforcing pesticide regulations that had their plans approved, are:

- **Alaska** (Alaska Department of Environmental Conservation)
- **California** (California Department of Pesticide Regulation)
- **Nebraska** (Nebraska Department of Agriculture)
- **New York** (New York State Department of Environmental Conservation)
- **Oregon** (Oregon Department of Agriculture)
- **Vermont** (Vermont Agency of Agriculture, Food and Markets)
- **Puerto Rico** (Puerto Rico Department of Agriculture)
- **U.S. Virgin Islands** (U.S. Virgin Islands Department of Planning and Natural Resources)

The five federal agencies that had their plans approved are:

- U.S. Department of Agriculture, Animal and Plant Health Inspection Services, Plant Protection and Quarantine
- U.S. Department of Agriculture, Forest Service
- U.S. Department of Defense
- U.S. Department of Energy; Bonneville Power Administration
- U.S. Department of the Interior, Bureau of Land Management

The EPA has specialized certification requirements for aerial application that include the following:

- A person must be at least 18 years old to qualify as a noncertified applicator using RUPs. (Exception: A person under the supervision of an immediate family member and applying non-commercially must be at least 16 years old.)
- Required pesticide certification at least once every five years through either written exams for each certification or by completing specific training in a continuing education authority for commercial applicators.
- Requires states to adopt Continuing Education Unit (CEU) criteria for the quantity, content and quality assurance of CEUs and verification of completed CEU coursework.
- Allow states to require recertification by exam or completion of CEUs.
- States must require commercial applicators to maintain the following records for a minimum of two years: Current law mandates that state plans include requirements for certified commercial applicators to maintain operational records with the following information for at least two years: the name and address of the person for whom the pesticide was applied; the location of the pesticide application; the size of the area treated; site to which RUP was applied; time and date of application; product name and EPA registration number of RUP applied; the total amount of the pesticide applied; the name and certification number of the certified applicator that made or supervised the application, and if applicable, the name of any noncertified applicator(s) that made the application under the direct supervision of the certified applicator.
- Requires state certification plans to specify whether and under which circumstances the state would certify applicators based on the applicator having been certified by another state.
- Defines “use” as in “to use a pesticide” to include any pre-application activities (including arranging for application, and mixing and loading), applying the pesticide or supervising use by a noncertified applicator, transporting or storing pesticide containers that have been opened, cleaning equipment, disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other pesticide-containing materials.
- Certification exams for aerial applicators must test knowledge of the following areas:
    - **Labeling –** Label requirements specific to aerial application, including:
        - Spray volumes.
        - Buffers and no-spray zones.
        - Weather conditions specific to wind and inversions.
    - **Application equipment –** Understanding of how to choose and maintain aerial application equipment, including:
        - The importance of inspecting equipment prior to use.
        - Selecting the proper nozzles.
        - Knowledge of the components of an aerial application system, including hoppers, tanks, pumps and nozzles.
        - Interpreting a nozzle flow rate chart.
        - Determining the number of nozzles for intended pesticide output using nozzle flow rate chart, aircraft speed and swath width.
        - How to ensure nozzles are placed to compensate for uneven dispersal due to uneven airflow from wingtip vortices, helicopter rotor turbulence and aircraft propeller turbulence.
        - Where to place nozzles to produce the appropriate droplet size.
        - How to maintain the application system.
        - How to calculate the required and actual flow rates.
        - How to verify flow rate using fixed timing, open timing, known distance or a flow meter.

    - When to adjust and calibrate equipment.
- **Application considerations –** The applicator must demonstrate knowledge of factors to consider before and during application, including all the following:
    - Weather conditions that could impact application by affecting aircraft engine power, takeoff distance and climb rate or by promoting spray droplet evaporation.
    - How to determine wind velocity, direction and air density at the application site.
    - The potential impact of thermals and temperature inversions on aerial pesticide application.
- **Minimizing drift –** The applicator must demonstrate knowledge of factors to consider before and during application, including all of the following:
    - How to determine drift potential using a smoke generator.
    - How to evaluate vertical and horizontal smoke plumes to assess wind direction, speed and concentration.
    - Selecting techniques that minimize pesticide movement out of the area to be treated.
    - Documenting special equipment configurations or flight patterns used to reduce off-target pesticide drift.
- **Performing aerial application –** The applicator must demonstrate competency in performing an aerial pesticide application, including all the following:
    - Selecting a flight altitude that minimizes streaking and off-target drift.
    - Choosing a flight pattern that ensures applicator and bystander safety and proper application.
    - The importance of engaging and disengaging spray precisely when entering and exiting a predetermined swath pattern.
    - Tools available to mark swaths such as GPS and flags.
    - Recordkeeping requirements for aerial pesticide applicators, including application conditions if applicable.

Top 10 Tips for Success at the NAAA Ag Aviation Expo

We look forward to seeing you in a few days at the 2022 NAAA Ag Aviation Expo in Knoxville, your one-stop shop for networking, education and professional development and fun, all while honoring 100 years of the aerial application industry!

Follow these steps to have a successful visit in Knoxville:

1. Pick up your badge or register beginning Sunday, Dec. 4, at the Knoxville Convention Center in the Park Concourse (second floor). Registration hours are below and fees can be viewed **here**.

- **Sunday, Dec. 4:** 12–6 p.m.
- **Monday, Dec. 5:** 7 a.m.–6:30 p.m.
- **Tuesday, Dec. 6:** 7:30–5 p.m.
- **Wednesday, Dec. 7:** 8 a.m.–3 p.m.
- **Thursday, Dec. 8:** 8 a.m.–12 p.m.

2. Download our NAAA Expo App, which is the most up-to-date program on-site. Visit **AgAviation.org/expoapp** to view the details.

3. Don't have a smartphone or tablet to download the app? No problem. Simply pick up an Ag Aviation Expo Program at the NAAA Registration desk, as well as your attendee bag, which is filled with great items from our sponsors.

4. Earn CEUs! Currently, nearly two dozen states are offering CEUs for the Aerial Application Technology Research Session and some states are offering credits for education sessions. CEUs are also being offered for Certified Crop Advisors. Don't forget to bring your license (we cannot submit your attendance without the license number)! Visit the **NAAA website** to view the states offering CEUs. Even if your state is not offering CEUs, don't pass up the opportunity to learn about new technologies, programs and services in the industry.

5. Educate yourself at the Kickoff Breakfast, General Session and many education sessions. View the schedule **here**. Hear from Captain Scott Kelly at the **Kickoff Breakfast**. The **General Session** speakers are Dr. Stan Musick and Farm Babe Michelle Miller.

6. Conduct business for your operation at the two-day NAAA Trade Show featuring 160-plus exhibitors and four aircraft on the floor.

7. New and low-time ag pilots should attend Com*paass* Rose on Sunday and **"Ask the Expert" Speed Mentoring** on Monday afternoon. These sessions are designed specifically for those interested in the industry or for those with five or fewer years of experience. This is your opportunity to talk with industry experts in a small setting.

8. Ladies! The Ag Aviation Expo isn't just for men. Check out the fun Support Committee Programming to network, learn from other women in the industry and have some fun, including Monday's Sunsphere Lunch and Wednesday's Relationship Drift and Athena presentations.

9. Purchase equipment, parts, services and even goodies you might need while supporting NAAA programs—**bid on items in the Live Auction Tuesday at 5:30 p.m. and during the Silent Auction.** The **Silent Auction** opens at noon on Tuesday and closes at 2:30 p.m. on Wednesday. There is no eBidding this year; please bid in person at Booth #123.

10. Visit with old friends and make new ones during the Kickoff Breakfast (sponsored by BASF), Welcome Reception (sponsored by UPL North America), Transland Breakfast, Live Auction Reception (reception sponsored by Syngenta), Pratt & Whitney Canada Reception, Farewell Reception and Excellence in Ag Aviation Banquet (sponsored by Corteva Agriscience).

2022 Ag Aviation Expo App Available for Download

Do you want the latest information on-site at this year's 2022 Ag Aviation Expo in Knoxville? We have it for you on the NAAA Expo App, which will feature the most up-to-date information right on your device! Our mobile app takes your pre-Expo, on-site and post-Expo experience to a new level and allows attendees who don't want to carry a paper program guide the opportunity to have all of the Ag Aviation Expo information stored directly on their devices. Users of the NAAA Ag Aviation Expo App will be able to receive updates and have the most up-to-date information right on their mobile devices. The NAAA Expo App is sponsored by Wilbur-Ellis.

Download Instructions:

- From iTunes or Google Play, download the AgendaPop App
- Enter Organizer Code: NAAA
- App can be viewed online at **mobile.agendapop.com/s/naaa/**

Features of the app include:

1. The complete event schedule with details and location of sessions.
2. Trade Show map and a list of exhibitors
3. A full list of the CEUs offered this year.
4. A list of auction items and companies supporting NAAA and the aerial application industry with a sponsorship.
5. Notifications about networking opportunities and other breaking event news pushed directly to your device via our Push Notifications.

On-site NAAA Ag Aviation Expo Registration Fees

When you arrive in Knoxville for the 2022 Ag Aviation Expo, your first order of business is to pick up your badge or register at the Knoxville Convention Center. View the **Schedule of Events**. View the **Trade Show Floor and List of Exhibitors**.

Pick up your badge or register beginning Sunday, Dec. 4, at the Knoxville Convention Center in the Park Concourse on the second floor. Registration hours are:

- **Sunday, Dec. 4:** 12–6 p.m.
- **Monday, Dec. 5:** 7 a.m.– 6:30 p.m.
- **Tuesday, Dec. 6:** 7:30 –5 p.m.
- **Wednesday, Dec. 7:** 8 a.m.–3 p.m.
- **Thursday, Dec. 8:** 8 a.m.–12 p.m.

Pre-registered? There will be a badge pickup table for attendees and exhibitor booth personnel who pre-register by Nov. 28.

Member & Non-Member Registration Prices

(Includes Welcome Reception & Farewell Reception Tickets; NO banquets; see banquet pricing under Additional Items)

- **Member: $345**
- **Member Spouse: $280**
- **Non-Member: $$1,080**
- **Non-Member Spouse: $415**
- **Child (under 18 with paid adult): Free**
- **Day Pass Members (only available on-site): $175 per day**
- **Day Pass Non-Members (only available on-site): $380 per day**
- **SPECIAL FAMILY/FRIENDS ACCESS PASS (only available on-site): $50 per day** (Only available to non-industry guests of registered attendees/exhibitors who also have purchased breakfast and banquets.)
    - Must be purchased by fully registered NAAA Member attendee or exhibitor.
    - Maximum of 2 people per registered attendee or exhibitor.

Additional Items

- **Kickoff Breakfast is sold out.**
- **Thursday Excellence in Ag Aviation Banquet ticket:** $90 each
- **Monday Welcome Reception ticket:** $50 (for family member not attending Expo)
- **Thursday Farewell Reception ticket:** $35 (for family member not attending Expo)

Flying in the Wire and Obstruction Environment Course to be Offered at Ag Aviation Expo

On Sunday, Dec. 4, in Knoxville, NAAA is hosting a Flying in the Wire and Obstruction Environment Course, acclaimed by professional

airplane and helicopter operators worldwide. This course is for both fixed-wing and helicopter pilots. It gives low-altitude aviators the essential skills to safely operate an aircraft in wire and obstruction environments. Learn how to identify signs of wires and why ag aviators hit wires they already knew were there. This course may very well save your life—don't miss it. The cost to attend is $100 per person, and you can register **here**.

The course is taught by Utilities/Aviation Specialists Inc., a unique group of aviation safety practitioners who provide safety auditing, specialized training, installation of safety management systems, and technical aviation consulting. They provide mission-specific expertise in specialized applications which require skill sets above those found in most routine transport operations. Learn more about Utilities/Aviation Specialists Inc. at **helicoptersafety.com**.

The course will take place at the Knoxville Convention Center on Sunday, Dec. 4, from 8 a.m. to 1 p.m.

Many Auction Items Up for Bid at Live Auction; Letter of Credit Required for PT6A-34AG Engine

Thank you to the many companies that support ag pilots and their operations, as well as the industry, through donating items for the **Live and Silent Auctions** at the NAAA Ag Aviation Expo. The money raised from these items supports NAAA programs.

Join us for the Live Auction & Reception on Tuesday, Dec. 6, at 5:30 p.m. at the Knoxville Convention Center. All are welcome to enjoy the auction and food and beverages sponsored by Syngenta. The Silent Auction bidding will be open Tuesday and Wednesday during NAAA Trade Show hours; there is no electronic bidding this year.

Pratt & Whitney Canada Engine Details

Thank you to Pratt & Whitney Canada for its generous donation of a brand-new PT6A-34AG turboprop engine. The engine is valued at $584,835. The engine build specification is 1334, used on the Air Tractor, Thrush and Turbine Conversions STC. The winning bidder is required to pay $20,000 down on-site, and the remainder of payment is due within 30 days. Please provide a letter of credit from a financial institution to **Lindsay Barber**.

Register for AXEing for PAASS, a NAAREF Fundraiser at the 2022 Ag Aviation Expo

Help us raise money for NAAREF and PAASS by showing up with your throwing arm for **AXEing For PAASS**, a fundraiser for the ag aviation industry's premier educational safety program where axes are thrown by participants at a large dartboard-like target. The event takes place 7-9 p.m., Sunday, Dec. 4, at Craft Axe Throwing in Knoxville.

Teams are four people each and the donation to participate is $110/per person. Cash bar will be available (draft beer, canned beer, seltzer and ciders), as well as light snacks (you can bring your own food, you cannot bring your own alcoholic beverages). Event will take place 7-9 p.m. **Register here**.

All players will begin with eleven points and the amount you score is deducted from the total. The circles of the 'dartboard' are different point values and the first to count down from 11 to zero wins (ties will be broken with additional throws).

Per the facility: On-site, participants will be required to sign a waiver and receive a short training before the event begins. Throwers MUST wear closed-toed shoes; avoid wearing loose/baggy clothing and accessories.

Shuttle Transportation will be provided between the Knoxville Convention Center and Craft Axe Throwing. At the convention center, the shuttle will pick up at the Clinch Concourse beginning at 6:30 p.m. The shuttle with continuously run until 7:30 p.m. and again from 8:30 to 9:30 p.m. If you'd like to use your own transportation to the event, the address is Craft Axe Throwing, 119 W. 5th Avenue, Suite 150, Knoxville, TN 37917. **Register here**.

FAA Proposes AD for Tail Rotor Drive on Bell 206 Model Helicopters

The FAA proposes to adopt a new airworthiness directive (AD) for all Bell Textron Canada Limited Model 206A, 206A-1 (OH-58A), 206B, 206B-1, 206L, 206L-1, 206L-3 and 206L-4 helicopters. This proposed AD was prompted by a loss of tail rotor drive due to a failure of an adhesively bonded joint between an adapter and a tube on one of the segmented tail rotor drive shaft (TRDS) assemblies.

This proposed AD would require the following:

- Determining if an affected TRDS is installed.
- Repetitively inspecting the bond line for damage.
- Repetitively performing a proof load test of the TRDS assembly.
- Depending on the results of the inspections or proof load tests, removing an affected TRDS from service.

Read the complete proposal **here**. The FAA is accepting comments on the proposed AD until Jan. 12, 2023. To comment, follow the directions listed in the proposed AD.

NAAA Member's Spouse Uses Unique Learning Program to Expose N.D. Middle School Students to Agriculture

A unique new program at the Northern Cass School in Hunter, North Dakota, is teaching kids about the importance of agriculture in their lives. The Farm to Fork studio program was started by middle school educator Sue McPherson to introduce 6th, 7th and 8th grade students to careers in agriculture and build their "life skills and competencies in a different way than what they'd get in a traditional classroom setting," ***Agweek* reported**. Sue is married to NAAA operator member Toby McPherson and has been a teacher for 25 years. Toby owns Tall-Towers Aviation in Page, North Dakota.

Sue works at the Northern Cass School District's middle school in a rural community 25 miles northwest of Fargo, North Dakota. The school district has moved to a "personalized learning" model that includes letting students choose "studios" in middle school for deeper exploration. This is its first year utilizing the studio system. Sue started the Farm to Fork studio because the school was surrounded by agriculture, yet most of her students did not grow up on a farm. As *Agweek* wrote, "she saw an opportunity to open their eyes to where their food comes from and to the opportunities in agriculture they might not see."

Watch Agweek TV's video below and read the full story **here** to learn more about the innovative ways Sue is teaching her middle school learners about agriculture. That's something NAAA members can all be thankful for this holiday season.

FAA Increases Duration of Aircraft Registration

Last week the FAA increased the time required for aircraft owners to reregister their aircraft from three years to seven years. This affects commercial and noncommercial aircraft starting Jan. 23, 2023.

The **rule** was issued as a Direct Final Rule. The FAA is accepting comments until Dec. 22, and if an adverse comment is received, the comment will be published or the rule may be changed. In addition, the FAA is applying this amendment to all aircraft currently registered under existing FAA regulations governing aircraft registration, which will extend valid Certificates of Aircraft Registration to a seven-year duration. This change was mandated by the FAA reauthorization act of 2018.

Two ADs Affecting Bell 206 Model Helicopters

The FAA has issued the following two airworthiness directives for Bell 206 helicopters:

Main Rotor Blade Delamination: The FAA is adopting a new airworthiness directive (AD) for Bell Textron Canada Limited Model 206L, 206L-1, 206L-3 and 206L-4 helicopters with a certain part-numbered main rotor (M/R) blade installed under Supplemental Type Certificate SR02684LA. This AD was prompted by delamination of M/R blades. This AD requires a repetitive inspection for delamination and, depending on the results, removing the M/R blade from service and reporting certain information.

This AD requires action before the M/R blade accumulates 400 total hours time-in-service or 2,400 engine starts since initial installation on any helicopter or within 100 hours TIS after the effective date of this AD, which is Dec. 23, 2022. The complete AD may be viewed **here**.

Tail Rotor Drive Shaft Thomas Coupler: The FAA is superseding airworthiness directive (AD) 2021-26-08, which applied to certain Bell Textron Canada Limited Model 206, 206A, 206A-1, 206B, 206B-1, 206L, 206L-1, 206L-3 and 206L-4 helicopters. AD 2021-26-08 required removing certain nuts from service, installing newly designed nuts, and applying a specific torque and a torque stripe to each newly installed nut. Since it issued AD 2021-26-08, the FAA determined certain torque values and part numbers need to be revised.

The new AD, 2022-20-04, has an effective date of Dec. 23, 2022. You may view this new AD and the changes made **here**.

Dusty Crophopper Facebook Post Becomes NAAA's Most Viewed Social Media Post Ever, Reaching 495,000 People

In October, NAAA's Facebook post about the Dusty Crophopper ag plane being placed in its permanent home at the Smithsonian National Air and Space Museum's newly renovated Steven F. Udvar-Hazy Center quickly became the association's most viewed social media post ever, reaching nearly 500,000 people. That's almost 10 times higher than any of NAAA's previous highest-performing Facebook posts.

Tagging the **Smithsonian** at the end of the post helped it go viral by entering the feeds of many of the Smithsonian's 686,000 Facebook followers.

Here are some of the astonishing metrics for NAAA's Oct. 19 **Dusty Crophopper post**:

- **Reach:** The post reached 495,310 people.
- **Engagements:** The post garnered 16,400 engagements, which includes the number of comments, shares, clicks and reactions recorded by clicking one of the buttons to register users' reaction (Like, Love, Haha, Wow, Sad, Angry).
- **Reactions, Comments and Shares:** The post generated 4,773 reactions, including a whole lot of Likes, 258 comments and 426 shares.

To give you some perspective on just how viral NAAA's Smithsonian-aided Dusty Crophopper post went, another one of NAAA's most widely circulated posts reached 33,400 Facebook users when NAAA marked the end of the agricultural aviation industry's 100th anniversary and the beginning of its 101st anniversary in an Aug. 3, 2022, post. An Aug. 3, 2021, post on the day of the aerial application industry's centennial reached 26,318 Facebook users.

Another one of NAAA's biggest Facebook posts also involved Dusty Crophopper. A July 31, 2021, announcement that the Air Tractor AT-400A Dusty Crophopper aircraft was about to head east for Dusty's "final hangar parking spot at the Smithsonian Institution's Air & Space Museum on the 100th anniversary of the first aerial application, August 3, 2021," reached 51,567 Facebook users.

The combined reach of all three of those higher-performing posts pales in comparison to the 495,000 people reached by last month's post about Dusty Crophopper's new digs at the National Air and Space Museum's Udvar-Hazy Center!

The lesson? To help turbocharge NAAA's Facebook posts, share them on your own Facebook page and other social media platforms.

Dusty's Road to the Smithsonian

Of course, Dusty Crophopper is the star of the popular animated Disney films *Planes* and *Planes: Fire & Rescue*. The road to getting the Dusty Crophopper-adorned Air Tractor AT-400A that Rusty and Lea Lindeman of Rusty's Flying Service in Texas owned into the National Air and Space Museum was by no means a straight one. After months of discussion, NAAA successfully mediated an agreement with Rusty Lindeman, The Disney Corporation and the Smithsonian Institution that Dusty Crophopper would be donated to the Smithsonian's National Air and Space Museum. NAAA received the official confirmation from the National Air and Space Museum's general aviation curator in January 2021.

The real-life replica of Dusty was on display at NAAA's 100th anniversary celebration in Leesburg, Virginia, on Aug. 3, 2021. At that event, Dorothy Cochrane, the Smithsonian's general aviation curator (pictured above), accepted the full-sized, fully flight-capable replica of Dusty Crophopper from the Lindemans on behalf of the National Air and Space Museum.

Dusty Crophopper made his Smithsonian Institution National Air and Space Museum debut at the Steven F. Udvar-Hazy Center's annual "Innovations in Flight Family Day," an outdoor event on Aug. 21, 2021.

Construction at the Udvar-Hazy Center delayed the public unveiling until this fall of Dusty Crophopper's permanent home, which is now under the tail of the Lockheed 1049F Super Constellation and next to a Grumman G-164 Ag-Cat. Ralph Holsclaw of Growers Air Service in California donated the Grumman G-164 Ag-Cat to the Smithsonian in 2009.

NAAA Joins in Urging Congress to Reaffirm EPA's Preemptive Role Regulating Pesticides

In November, NAAA joined 332 pesticide user organizations urging congressional leadership to legislatively reaffirm that the EPA is the primary, federal authority under FIFRA for making pesticide findings and decisions and that states may regulate their use but not impose additional labeling or packaging requirements. This preemption of the EPA over pesticide regulations has been recently compromised. City and county officials across the country are trying to regulate the sale and use of pesticides in their jurisdictions. This is a move that sets stricter standards and ignores the decisions already made by the EPA's environmental health and safety experts.

Adding fuel to the fire is a bill introduced by U.S. Sen. Cory Booker (D-N.J.) essentially imploding the EPA's sound science regulatory authority and allowing every county and municipal government in the country to establish its own pesticide rules. Booker's bill would also flatly ban organophosphate and neonic pesticides as well as paraquat and glyphosate regardless of state agencies or the EPA allowing their judicious use based on scientific data. Booker is a member of the Senate Ag Committee, so the pursuit of stronger pesticide preemption provisions in the farm bill will likely result in rigorous debate this next year when the bill must be reauthorized.

The letter lays out a strong case for further clarifying pesticide preemption statutorily, stating:

> Lack of certainty on EPA-approved, science-based nationwide labels will erode access to current and future pesticides, threatening crops and grower incomes, conservation practices, public health, vital infrastructure, and ultimately raise food prices for families amidst record-high inflation. Growers and users need reaffirmation from Congress that states have every right to build on the federal government's baseline regulations but cannot directly contradict the scientific conclusions of the EPA.

> The last several years have demonstrated how fragile our food production and infrastructure systems can be. Whether driven by war in Ukraine, extreme weather events, or COVID-19 disruptions, our economic wellbeing and access to a safe, affordable food supply relies on many factors. Pesticides are an essential tool for many growers and other users whose operations rely on them, and for consumers and our environment which benefit from their use. If left unchecked, some pests can inflict crop yield losses greater than 80 percent, destroy important infrastructure, harm public health through mosquito-borne disease or other outbreaks, among other harms. Additionally, pesticides are essential to maintaining and expanding vital conservation practices, such as cover crops or tillage reductions, which remove the equivalent of millions of cars from roadways annually, reduce soil erosion, and prevent nutrient loss to watersheds. Without access to safe, effective pesticides regulated with the best available science, food prices for American families will rise significantly and our ability to protect public health, infrastructure, and our environment will be greatly diminished.
>
> EPA is the authority to make foundational, science-based decisions on how pesticides can be labeled and used. States are permitted to regulate the sale and use of pesticides under FIFRA but are preempted from requiring additional or different pesticide labels or packaging. Nevertheless, in recent years we have seen actions from states that directly and unjustifiably contradict EPA's scientific findings on pesticide safety. These actions risk creating an unworkable, inconsistent patchwork of state or municipal pesticide labels that can quickly disrupt commerce and access to these much-needed tools. As concerning, this threatens to jeopardize public confidence in EPA's authority and science-based regulation under FIFRA, as well as the continued availability of individual tools on which there are contradictory claims.
>
> We urge Congress to seriously consider the far-reaching implications should this tension go unaddressed by federal policymakers. The ability of farmers, land managers, and other users to produce an abundant food, feed, and fiber supply, combat public health threats, implement important conservation practices, and maintain vital transportation and utility infrastructure will be significantly impaired. In turn, food prices will further increase for families; important infrastructure will fall into disrepair; our population will be increasingly vulnerable to vector-borne diseases; and our ability to combat climate change and other environmental challenges will be undermined. We strongly urge Congress to reaffirm that EPA is the primary, federal authority under FIFRA for making pesticide findings and decisions, and that states may regulate their use, but not impose additional labeling or packaging requirements. Congressional action on this important matter will ensure our nation's farmers and other users have reliable access to these vital tools in the years to come.

Read the full letter **here**.

Pratt & Whitney Canada and CD Aviation to Offer Engine Seminars at Ag Aviation Expo

Pratt & Whitney Canada PT6 Seminar: Pratt & Whitney Canada will offer a PT6 Seminar on Sunday, Dec. 4, from 8 a.m. to 5:30 p.m., before the NAAA Ag Aviation Expo begins at the convention center in room 301DE. The session will present a combination of basic turboprop engine principles along with interpretations of engine parameters to enhance pilot and mechanic knowledge of engine performance, monitoring and trends. *No RSVP required for 2022.*

CD Aviation Services Seminar: CD Aviation Services will offer a course on Sunday, Dec. 4, from 8 a.m. to 5 p.m., before the NAAA Ag Aviation Expo begins at the convention center in room 300 A. CD Aviation Services has developed a one-day comprehensive training course which covers all aspects of the Honeywell TPE331 series engines including design, model variations, maintenance and troubleshooting. It was designed to provide owners, operators, pilots and mechanics with the technical information needed to fully understand and utilize their TPE331. The course is fully accredited by the Federal Aviation Administration as an IA Refresher Training Course.

View the complete NAAA Ag Aviation Expo schedule **here**.

Register for the Ag Aviation Expo

Although pre-registration has ended for the Ag Aviation Expo, you can still register in advance to avoid the registration lines on-site and help us with better head counts for our meal events. Register **here**.

Register for AXEing for PAASS

AXEing for PAASS is a fundraising event for NAAREF's PAASS program where axes are thrown by a participant at a giant dartboard-like target. Anyone can play and win! Join us for this friendly competition on Sunday, Dec. 4, at 7 p.m. This is a terrific social event with the added benefit of raising money for PAASS and the lifesaving, environmental stewardship benefits it provides. Teams are four people each and the donation to participate is $110/per person. A cash bar will be available (draft beer, canned beer, seltzer and ciders), as well as light snacks (you can bring your own food, but you cannot bring your own alcoholic beverages). The event will take place from 7 to 9 p.m. Register **here**.

Find Your Next Seat at the 2022 Ag Aviation Expo: Look for Sign-up Boards at Registration for Pilots to Find Operators and Operators to Find Pilots

Looking for a pilot? Looking for an operator to work for? NAAA is excited to announce that we are bringing back the on-site job board at the 2022 Ag Aviation Expo in Knoxville. The jobs board is intended to help both operators looking for a pilot and pilots looking for a seat.

The NAAA jobs board will be located near the registration area where pilots and operators can meet to discuss available positions and qualifications. The jobs board will allow operators and pilots to post information about who they are or what they are looking for, as well as a date and time they intend to be present at the board to meet face-to-face. Both groups can post on the board and check it throughout the week for opportunities posted that might fit their needs. There is also a space to provide a cell phone number in case a face-to-face meeting doesn't work out at Expo.

The jobs board will be split into two sections, one side for operators looking for pilots and the other for pilots looking for a seat. Operators looking for a pilot can post their name, operation's name, location, the hours of ag experience, if any, they are looking for, and if they need a pilot with experience with a specific type of aircraft.

The pilot section will allow those looking for a seat a place to include their name, location, total flight hours, tailwheel hours and ag hours. It will also have a space for pilots to list any other related experiences they have, such as prior farm work or experience with a specific aircraft type. A space for the pilot's cell phone number is also provided.

The NAAA Ag Aviation Expo jobs board will provide a great service to operators and pilots who are looking for each other. Don't forget about **NAAA's online job listings page**, found in the careers section of NAAA's website. This is available year-round to NAAA members looking to post an open seat or members looking for a seat. It's just one more valuable resource NAAA offers its members.

The Ag Aviation Expo is the must-attend aerial application event of the year. This year it offers the additional opportunity of filling ag aircraft seats with pilots ready to protect our nation's food, fiber and bioenergy. Register **here**.

For low-time pilots, don't forget to attend Com*paass* Rose on Sunday, Dec. 4, and "Ask the Expert" Speed Mentoring on Monday, Dec. 5.

Proposed AD to Establish Life Limits on Walter/GE Compressor Cases and Drums

The FAA proposes to adopt a new airworthiness directive (AD) for certain GE Aviation Czech s.r.o. M601E-11, M601E-11A, M601E-11AS, M601E-11S and M601F model turboprop engines. This proposed AD was prompted by the exclusion of life limits for certain compressor cases and compressor drums from the airworthiness limitations section of the engine maintenance manual.

This proposed AD would require recalculation of the consumed life for the affected compressor cases and compressor drums and, depending on the results of the recalculation, removal and replacement of the affected compressor case or compressor drum with a part eligible for installation.

The proposed AD may be viewed **here**. If adopted, the AD would require action within 90 days after the effective date of the AD.

Comments must be received by Dec. 27. To comment, follow the instructions at the link above or go directly to the **comment page**.

Renew Your Membership for 2023: We're Better Together!

Thank you for your support of NAAA as a 2022 member. NAAA delivers remarkable value that benefits your bottom line, provides the crop input tools you need, enhances the industry's safety and professionalism through substantive educational programming and offers excellent business networking opportunities. Please **renew your NAAA membership** for 2023. Watch our new video below, where you'll hear from your fellow members why membership is essential to your business.

NAAA continues to passionately advocate on behalf of ag aviation and raise awareness about its benefits to the public and national policymakers, which we capitalized on across policy and all media channels during the **100th anniversary** of the industry.

This positive coverage of the industry and its importance to global food, fiber and bioenergy production comes at a crucial time as NAAA fights to preserve the aerial use of pesticides that are being targeted for cancellation or unnecessary and burdensome restrictions under current EPA leadership. It takes your membership resources to save these aerial uses and positively represent the industry before the public.

As the industry moves into its second century, NAAA and NAAREF have developed a way to augment industry advancement of safety and application accuracy while showing your customers, regulators, insurers, pesticide manufacturers, and the public the professional nature of the industry. Our new **Certified-Professional Aerial Applicator Safety Steward (C-PAASS)** program, launching in 2023, will fill that very role for those that want to participate. We know education works to reduce accidents and drift occurrences based on PAASS program stats. Since the first PAASS season in 1998-1999, the ag aviation accident rate (number of accidents per 100,000 hours flown) has dropped nearly 26%, and the fatal accident rate has fallen 10%.

The impetus for developing C-PAASS was to expand and gain recognition for maximizing professionalism by ultimately receiving additional benefits for being certified, such as insurance discounts and more flexibility pertaining to pesticide label language and for ag pilots to market to their customers that they have undergone additional training and development to best ensure that they can provide high-quality service.

Please make it a priority to **renew your NAAA membership**—the payoff far exceeds what you will spend in dues in the form of effective advocacy that reduces regulation and taxes affecting your aerial application business. Trade association membership dues are tax deductible.

NAAA Support Committee Events at Ag Aviation Expo

We look forward to seeing you at the 2022 NAAA Ag Aviation Expo in Knoxville Dec. 5-8. The NAAA Support Committee has organized fun events at the Ag Aviation Expo for spouses/significant others, family members and office crew. Join them for what promises to be an outstanding convention!

2022 Ag Aviation Expo Support Committee Events

Monday, Dec. 5: Lunch & Tour of the Sunsphere: (RSVP required) 11:30 a.m.–2:30 p.m.
Join us for Monday's lunch and tour of the Sunsphere, which was built for the 1982 World's Fair and is a one-of-a-kind structure. The Observation Deck offers a breathtaking 360-degree view stretching from downtown to the Great Smoky Mountains including World's Fair Park, the Tennessee River and the University of Tennessee Campus. The Sunsphere offers a 1982 World's Fair timeline, gallery, memorabilia and gift shop. RSVP required for event to Cathy Ellett at **catellett@gmail.com**. *Sponsored by GarrCo Products Inc.*

Wednesday, Dec. 7, 8–9:30 a.m.: NAAREF Relationship Drift
(no RSVP required)
The Relationship Drift Session will look at how personal relationships affect pilot decision making and safety. Men and women should attend this session together, including couples and office crew. This is similar in format to the popular Com*paass* Rose program, but instead of better facilitating relations between inexperienced pilots and more experienced operators, the new session is designed to facilitate relations between operators/pilots and their spouses or significant others and office crew. All are invited!

Wednesday, Dec. 7, 9:45–11:45 a.m.: Athena Project Presentation
(no RSVP required)
Attend the Wednesday Athena Project presentation, The Importance & Challenges of Balancing Work and Home. The program is written by the Athena presenters and committee for the office bookkeepers, the working loaders, operators, pilots and family members. The program covers information that is beneficial to anyone in the industry and family members. Attend this session, whether you're a spouse, office crew or family member, to gain inspiration, encouragement and advice on better ways to serve our industry. All are invited and no RSVP is required. *Sponsored by Chuck Holzwarth Flying Service.*

Important Call for GPS Data to Protect Manned Ag Aircraft from Drones

Earlier this year, an FAA advisory committee weighted with drone interests from Amazon, Google and other unmanned corporate interests suggested that the agency promulgate rules that drones operating beyond visual line of sight be permitted to:

- Increase their weight to 1,320 pounds
- Not equip with ADS-B identification technology
- Not give the right of way to manned aircraft when operating in rural, low-altitude airspace because they claimed there are no other users of this airspace.

As an ag aviator, you know these requests to be patently unsafe and based on false premises. As such, we call on you to help us collect information on ag aircraft's use of the low-altitude airspace. NAAA is working with and supports Mississippi State University's (MSU) Raspet Flight Research Laboratory and its continuing research on safe operational distances between low-altitude, manned aircraft and drones. The study's objectives are to:

1. Identify Ag Aircraft Operational Trends

2. Develop Ag Aircraft Operational Model
3. Validate Model through Observation/Collection of Empirical Data
4. Inform/Educate UAS Operators
5. Promote Safety in all Low-Altitude Ag Environments

Your voluntary participation in this study is critical to achieving these objectives. NAAA encourages you to donate your GPS flight log data to participate in this timely research. Logs from any year(s) are welcome and will be washed of any identifying information prior to use.
Many of you have previously contributed during the first stage of data collection from 2017 to 2020 when NAAA members donated 49,180 flight logs from 20 states. The second stage of the study began in 2021 and seeks to additionally include aircraft make and model info. These details are important, as the airspace modeling will be impacted by aircraft types differently, such as fixed-wing versus helicopter operations.

More GPS flight log data is needed to continue this study. Because of the diverse growing areas and unique geographical challenges experienced by aerial applicators, it is imperative that as many states and regions as possible are represented. This will ultimately help facilitate the safe integration of unmanned aircraft into these different airspaces.

As a reminder, NAAA and Raspet have agreed that all submitted information will remain confidential, and all GPS flight logs will be stripped of any personally identifying information before any research is conducted using the data.

There are several methods available to submit your data:

1. Request a secure upload link for larger uploads OR email directly to Madison Dixon, Research Director.
   Email: mdixon@raspet.msstate.edu
2. Mail a flash drive or other storage device to the address below. (The device will be immediately mailed back once data is received if a return address is provided):

   Address:
   Attn: Madison Dixon
   Raspet Flight Research Lab – Bldg. 2
   114 Airport Rd.
   Starkville, MS 39759

NAAA Releases Book of the Century! Buy It Today

NAAA has released the book of the century—a century of agricultural aviation, that is.

One hundred years ago, an aerial crop dusting experiment spawned the birth of the agricultural aviation industry. To commemorate agricultural aviation's 100th anniversary, NAAA is pleased to present ***Agriculture's Air Force: 100 Years of Aerial Application***.

Agriculture's Air Force provides a new, updated account of aerial application's history, 35 years after Mabry Anderson's masterpiece, *Low & Slow: An Insider's History of Agricultural Aviation*, was published. NAAA's meticulously sourced book is based on a collective history of the agricultural aviation industry based on material from *Agricultural Aviation* magazine, *AgAir Update*, *Low & Slow* and other resources.

Beginning with ***Agricultural Aviation's* Spring 2021 issue**, NAAA published excerpts from *Agriculture's Air Force* and continued to do so through the **Fall 2021 issue**. Those stories are just a small slice of what's in the 268-page hardback edition, however. The complete book contains so much more.

Agriculture's Air Force delves into the intersection of agriculture and aviation. It chronicles the agricultural aviation industry's growth from its infancy in 1921 through the boom times after World War II and on to today's modern era of high-tech aerial application.

The finished hardback book has been years in the making but well worth the effort. "This is a significant piece of work covering not just the industry's history, but its essence," NAAA CEO Andrew Moore said. "We are proud of it and believe it will make a lasting contribution to the industry."

The story of agricultural aviation is much like the broader story of aviation: It is mostly punctuated with interesting smaller moments sandwiched between milestone developments. Aerial application is also the story of technological leaps and bounds.

Agriculture's Air Force covers five eras spanning more than 10 decades. In addition, it features 34 Spotlight pieces focused on significant individuals, organizations, trends, technologies and topics related to aerial application.

Agriculture's Air Force: 100 Years of Aerial Application may well be NAAA's most enduring 100th anniversary initiative. One thing's for sure: It is no textbook. The commemorative book is written from a fresh perspective that is entertaining and enlightening. Readers will come away with a new appreciation for agricultural aviation as a profession and the dedicated individuals who propel it forward.

Order Your Copy of Agriculture's Air Force Today!

Agriculture's Air Force retails for $45, excluding shipping. Order it from **AgAir Update's Online Store**.