

Fly Safe Campaign



MAINTAIN ACCIDENT AWARENESS

Don't become a statistic!

NTSB has reported 4 ag accidents including 1 fatal accident so far this year.

START SAFE AND AVOID WIRES

Ag flying operations will soon be increasing in many areas throughout the country. As your application season gears up, be aware that early in the season you are reacquainting yourself with your aircraft and flying environment. No matter how many hours you have flying ag aircraft, time off during the winter, even if it's a short time, means you might be a bit rusty with certain skills and procedures. New aircraft or technology updates in the cockpit, such as a new GPS unit, can further confound your ability to get back to your peak performance. Over the prior 10 seasons, 29% of the total accidents and 33% of the fatal accidents have occurred in the months of January through May. Use caution and think safety as your flying increases.

Always be on alert for obstacles. Last year, there were 20 controlled flight into terrain (CFIT) accidents, accounting for 36% of all ag accidents. Of those 20 CFIT accidents, 14 were wire strikes. Seven of the 12 fatal accidents in 2021 were wire strikes. For each application mission, it is imperative you devote sufficient effort to scouting for wires and other obstructions. You must maintain your awareness of wires throughout all phases of your flight including reconnaissance, entry into the field, applying in the field, and departing the field. Given the limitations of short-term memory and the numerous things requiring your attention during aerial applications, it can be easy to forget about wires in a field. In fact, a preliminary analysis of wire strike accidents from 2017 to 2021 suggests roughly half of pilots involved in wire strikes were aware of the wires they struck. Always keep wires in your thoughts.

To assist you with keeping the wires and other obstructions at the forefront in your mind, make every other thought that goes through your head about the wires. It is best to speak your reminder about the wires or other obstructions out loud to yourself. While this may seem silly, science has shown that speaking something out loud forces your brain to slow down, thus allowing you to spend more time focused on that thought. You may not see the wire anymore but saying "Wire!" will help you remember it's there.

Check Temporary Flight Restrictions (TFRs)

Always check TFR NOTAMs before flying! Make sure you have proof of a preflight TFR briefing from sources such as FSS or <https://www.1800wxbrief.com>.

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NTSB has reported 5 ag accidents including 1 fatal accident so far this year.

PILOTS: CHOOSE AN OPERATOR WHO VALUES SAFETY, LISTEN TO THEM, AND LIVE

When you find an operator who is focused on bringing you into the industry safely, **LISTEN TO THEM!** If they tell you you're done for the day, then you're done for the day. It doesn't matter if it's only noon and there's work left. If they keep you in a smaller and slower aircraft when you think you can handle something larger and faster, remember they have a good reason to not move you up – your life. PAASS realizes this season is expected to be busy and pilots are in short supply. This is no excuse to circumvent safety.

Operators, the future of our industry, and your business, is entirely dependent on bringing in new pilots safely and professionally. Monitor all of your pilots, but especially the new ones, for fatigue. Give them easier fields to begin with as they learn to fly ag. Point out known safety hazards when you assign them the work. Never assume they know something, even if you think it's obvious. If they have concerns about weather, don't push them. Work with them on developing personal minimums that will keep them safe. Work them into larger and faster aircraft at a pace they can handle. This might not be the same pace your operation needs to meet customer demands, but a bent aircraft and injured pilot can't get any work done. In a busy season it's easy to focus on getting work done, but seasons are a long-term game so play it safely to stay in it for the long term. Our industry, along with agriculture in general has a good economic outlook—if we stay healthy, safe and wise.

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NTSB has reported 7 ag accidents including 1 fatal accident so far this year.

HIGH NUMBER OF HELICOPTER ACCIDENTS IN 2022, DON'T GET INTO A TIGHT SPOT IN ANY AIRCRAFT!

Of the seven ag accidents reported by the NTSB for 2022, six involve helicopters. The single fatal accident for 2022 was a helicopter. That's 86% of the total ag accidents and 100% of the fatal ag accidents. The 2019 NAAA survey shows helicopters make up 16% of the ag fleet in the U.S. while the 2020 FAA GA survey shows helicopters are 22% of the fleet. No matter what type of aircraft you fly, please heed this and all other Fly Safes as we must always re-commit ourselves to safety.

All the NTSB reports on these accidents are preliminary with very few details and which could change. Two appear to be from hard landings, one involving autorotation. Two are completely unknown at this point; one of those was fatal. One was loss of control in a turn, and another a power line strike. In 2021 there were 22 total helicopter accidents (39% of the total ag accidents) and 4 fatal helicopter accidents (33% of fatal ag accidents). Of the 22 helicopter accidents, 10 were wire strikes. All four of the fatal helicopter accidents were wire strikes. No matter what you're flying, thoroughly scout your fields for wires and other obstructions and don't forget about them once you start your application. While the performance of a helicopter may tempt you to get close to obstacles to treat every part of a customer's field, do not let this temptation lead you into an accident. Maintain a safe distance from all obstacles.

Helicopters require additional routine maintenance – do not put repairs off no matter how busy you are. Proper mentoring is also critical for safety. If you're a helicopter pilot new to the aerial application industry, make sure you find an operator who will mentor you properly and bring you safely into the industry. Start with light loads on open, easy fields and gradually increase the difficulty of working around obstructions. Helicopter pilots must maintain a safe speed in a turn and not do pedal turns. Ag helicopter pilots must also understand the "height velocity curve" to survive an engine failure. There is little to no ferry time and helicopters need to be flown every second, so fatigue can be an issue. Make sure someone is monitoring how tired you are and try to stay well rested, hydrated, and nourished.

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Watch your fax or e-mail every other Monday in April and May and every Monday in June. July and August for scheduled issues. Supplemental messages may be sent when additional safety awareness is warranted. To be removed from the "Fly Safe" fax list, please call 202-546-5722 or e-mail information@agaviation.org. Let us know if you wish to be removed only from these Fly Safe messages or all faxes or e-mails from the NAAA.

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MAINTAIN ACCIDENT AWARENESS

Don't become a statistic!

NTSB has reported 9 ag accidents including 1 fatal accident so far this year. There has been 1 fatal accident not yet reported by NTSB bringing the total to 2 fatal accidents.

BE AWARE OF TURBINE ENGINE POWER LAG WHEN OPERATING TURBINE POWERED AG AIRCRAFT

As reported by the NTSB, a contributing factor to a 2020 ag accident was the pilot not recognizing the power lag associated with his turbine engine would fail to provide him with immediate power when he called for it. The airplane had touched down when the pilot saw what he thought was going to be a runway incursion. The pilot applied full power but due to the power lag from his turbine engine, he realized he would not have time to perform a go-around. He then reduced power but was unsuccessful at stopping the airplane before he struck the perimeter fence.

The power output of a free (sometimes called split-shaft) turbine engine lags for several seconds after the pilot moves the power from flight idle to a higher power setting. A free turbine engine has two separate counter-rotating turbines; one drives the compressor and the other drives the propeller. The lag occurs because the compressor and power turbine shafts are not connected and turn independently of each other. An increase in rpm of the compressor shaft will not immediately cause an increase in the power turbine shaft. The majority of turbine engines used in ag aircraft are free turbine engines.

When conducting aerial applications, keep this power lag in mind. Do not put yourself in a situation where you will be required to depend on the immediate availability of additional power. This is especially a concern for pilots who are transitioning from a piston ag aircraft to a turbine, as they will be accustomed to an immediate response when they increase power. Ag pilots flying free turbine powered aircraft need to anticipate and lead power changes and remember that the last 30% of the engine's rpm represents the majority of the thrust from the engine. Below that last 30%, application of power does not have much effect. Do not allow yourself to get behind the power curve.

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NTSB has reported 10 ag accidents including 1 fatal accident so far this year. There has been 1 fatal accident not yet reported by NTSB bringing the total to 2 fatal accidents.

BE A PROFESSIONAL AERIAL APPLICATOR

Making accurate and safe applications benefits your customers, you, and the aerial application industry. Your customers have hired you to provide pest control for their crops, and they rightfully expect a quality job. Adjacent growers and neighbors expect your application to stay on target. With UAS becoming commonplace, it is now easy for farmers to collect remotely sensed images to examine their crops for potential issues, including streaking from applications.

There were reports of streaking last season, particularly from fungicide applications on corn to treat tar spot. There are numerous reasons an application can streak. Pattern test your aircraft at an Operation S.A.F.E. fly-in to verify you have a uniform pattern and to identify your optimum swath width. Height is also critical - if you fly at a height of 15 feet at the fly-in, you cannot expect to achieve the same swath width in a field if you're flying with wheels in the tassels. Flying higher gives the pattern more room to spread out, so flying too low can shorten it compared to what it was at a fly-in. Test your pattern at the same height you spray at. Spraying during very calm conditions also has the potential to narrow your swath slightly, so use caution if you must spray when there's little wind.

The EPA and state regulatory agencies are always monitoring our industry. Agricultural aircraft are highly visible, and the N-number makes it easy for the public to identify the operator. In today's world of heightened fear of pesticides and other modern agricultural practices, it's very possible to have a complaint filed against you even if you did everything correctly. Keep good records and be up front with inspectors, no matter how frustrated you get. Even if they can't violate you on the original complaint, they can go through your records and statements to find some other infraction they can use to justify filing a complaint. Maintain membership in NAAA and state associations and document participation in PAASS and S.A.F.E. Spray safe and fly safe.

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NTSB has reported 13 ag accidents including 2 fatal accidents so far this year.

WEARING A HELMET CAN SAVE YOUR LIFE AND REDUCE THE SEVERITY OF A CONCUSSION

Reports are once again coming in that many ag aviators are not wearing helmets. While no safety device can completely guarantee your survival in an accident, wearing a helmet increases your chances. The trend of not wearing a helmet while working has even been seen with experienced ag pilots. The demand for bringing new pilots into the industry means it's even more imperative for experienced pilots to be setting good safety standards.

While a helmet cannot always prevent a concussion, it does reduce the severity of a concussion and can prevent more traumatic brain injuries. Your brain "floats" within fluid inside your skull. When your head hits something, it decelerates more rapidly than your brain floating within it. This causes your brain to smash into your skull, injuring it. A helmet works by reducing your head's deceleration rate, thus lowering the force of impact when your brain collides with your skull. A study of 97 fatal aviation accidents that occurred in Alaska from 2004 to 2009 concluded that 33 lives could have been saved by the use of a helmet. A study of U.S. Army helicopter accidents from 1972 to 1988 found that not wearing a helmet increased the risk of sustaining a fatal head injury in a crash by 6.3 times.

Reasons cited by ag aviators as to why they don't like to wear helmets include the additional weight, not comfortable, and reduced head movement. Modern aviation helmets virtually eliminate these arguments. They are light weight and comfortable while still providing maximum effectiveness. Please take every precaution you can to prevent an accident. In addition, take advantage of every safety device available to protect you in the event you are involved in an accident. This includes wearing a helmet and ensuring that the chin strap is properly affixed; wearing a fire-resistant flight suit; and strapping in with both a seat belt and shoulder harness. You may have reasons why you don't want to wear a helmet, but how does your family feel about you not doing everything you can to protect yourself? Fly safe and put your helmet on.

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DO NOT RISK YOUR LIFE, AIRCRAFT, CAREER, AND THE INDUSTRY JUST TO BUZZ SOMEONE

In 2019, an ag aviator ferrying back after completing his application mission decided to buzz his friend, who was working on a wind turbine near his return flight path. He incorrectly identified someone else as his friend and buzzed this technician, who happened to be holding a rope to stabilize a blade during maintenance. The aircraft's right wing struck the rope, throwing the technician through the air and breaking his leg and back.

The fallout from this incident led the American Clean Power Association (ACPA) to contact NAAA to complain about the accident and look for ways to prevent it from happening again. They notified NAAA that they were considering pursuing regulatory action aimed at preventing all aerial applications within and nearby wind farms. NAAA explained that this was one errant pilot who was not acting safely, professionally, or within industry guidelines and that we would continue to remind ag aviators about safety concerns related to flying in and around wind farms. The incident was a stark reminder of the PAASS motto: "Upon the Performance of Each Rests the Fate of All." One reckless act by a single pilot almost resulted in new regulations for the entire ag aviation industry.

There is absolutely no reason to buzz anyone or anything. Every aerial application is a focused mission – deliver the product uniformly and safely on the target crop, forest, or pest. Every action you take in the cockpit should undeterredly hone in on that mission. Buzzing or any other type of reckless flying not required for the mission can only result in negative consequences – a wrecked aircraft, injuries or death for yourself or a bystander, and complaints that can lead to additional regulations. Your mission is focused on controlling the targeted pest. Fly smart, fly safe, fly the application mission.

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