

## ***Fly Safe Campaign***



### **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.

### **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>.

### **Make a "Fly Safe" Resolution Now!**