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AG AVIATION ACCIDENT STATS A GOOD NEWS STORY

In 2014, there were 17 reported accidents for every 100,000 hours in the fixed-wing agricultural aviation sector. By 2021, that rate had fallen 65 percent, to 6.

No-one in New Zealand aviation needs to be told that agricultural aviation has always been an unforgiving business. But it has dramatically improved its safety record.

In the 1970s, in the fixed-wing ag sector, there were 270 accidents and 25 deaths. In the decade to 2020 there were 51 accidents and four deaths.

Manager of the CAA's team of analysts, Joe Dewar, has worked closely for many years with the agricultural aviation sector to improve its safety – including sending out to industry more regular updates about safety performance and notable occurrences.

"The fixed-wing ag sector is currently safer than it's ever been. I'm personally really heartened by this – operators should be proud of what they've achieved," he says.

The managing director and chief pilot of Hawke's Bay-based Aerospread Ltd, Bruce Peterson, says there's no one silver bullet that's suddenly 'fixed' the sector.

"It's a natural maturing of the industry. For instance, with modern training, it's about competence, and attitude to safety, not the number of hours you've spent training."

Joe Dewar believes the rollout of safety management systems has been key to improved safety.

"The proactive nature of SMS with its inclusion of all staff in identifying hazards and reporting them has undoubtedly had an impact."

But Joe also says an effective SMS is a moving target.

"Effective safety management requires constant vigilance and effort. It takes attention and discipline, but it can be done."

Bruce, who's been in the industry for 30 years, says there was a time in the infancy of the sector when risk – and tolerance of risk – was much greater.

"Those guys who came back from World War II, they were used to taking risks to get the job done. And they started out with ex-military aircraft with open cockpits and no brakes."

Today's industry has a far more intolerant attitude to risk-taking.

"We have modern health and safety regulations," says Bruce, "with individuals having to take personal responsibility for acting in a safe way, and ensuring their colleagues do.

"They're being held to account for the decisions they make, and operators are also being made to take personal responsibility."

Bruce says modern aircraft manufacturing has also done its bit for improved safety.

"We've got better performance and better reliability, particularly in the move from piston to purpose-built turbine engine aircraft."

Bruce says improving aircraft maintenance standards has also played a huge part in increased safety.

"The changes in the last 10 to 15 years have seen inspection intervals go to a maximum of 150 hours. A check that used to take a day will now take two to three, and that's a good thing."

Bruce says at Aerospread, new technology has probably made the biggest difference to safety.

"One of the best safety features we have now is that the weight from the loader is sent wirelessly to the aircraft so the pilot can double-check how much is in the bucket, before it goes on the aircraft.

"If there's too much for the conditions, you can drop the weight to whatever the pilot is comfortable with. Then they aren't having to decide on take-off whether to jettison some of it or try to fly with a too-heavy load."

Bruce says despite the modern engines and technologies, Aerospread still observes the safety basics it set out with a quarter of a century ago.

"For instance, each and every change of season, the guys and I talk about what that change of season means for our flying.

"And we still load the aircraft according to the conditions on the day.

"And a huge one for me, 'If the weather turns, and you bring the aircraft home, you can always go back to work if the weather improves'.

"If it's safely in the hangar ready to go to work, and you're also home safe, you've never made the wrong decision."

Comments or queries? Email **joe.dewar@caa.govt.nz**

Overall accident rate (accidents per 100,000 hours, 3-yearly rolling average)