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ATSB-XXXXX

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## Collision with terrain

### 5 km north-east of Wickepin, WA

## 3 October 2009

about 2 km away. It was the first application flight by the pilot that morning.

At about the time the pilot's loader driver was expecting the aircraft to return to the paddock for a second load of insecticide, the owner of the property discovered the wreckage of the aircraft in a field of knee-high wheat, which was adjacent to the canola crop that was to be sprayed (Figure 1).

The aircraft had impacted the ground in an inverted attitude, fatally injuring the pilot. There were no witnesses to the accident.

### Abstract

At about 1130 Western Standard Time on 3 October 2009, the pilot of an Air Tractor Inc. AT-502 aircraft, registered VH-ODP, took off from a paddock on a property about 5 km north-east of Wickepin, WA to conduct agricultural spraying operations. A short time later, the owner of the property discovered the wreckage of the aircraft, which had impacted the ground in an inverted attitude, fatally injuring the pilot. There were no witnesses to the accident.

The investigation is continuing.

### FACTUAL INFORMATION

*The information contained in this preliminary report is derived from initial investigation of the occurrence. Readers are cautioned that there is the possibility that new evidence may become available that alters the circumstances as depicted in the report.*

### History of the flight

At about 1130 Western Standard Time<sup>1</sup>, on 3 October 2009, an Air Tractor Inc. AT-502 aircraft, registered VH-ODP, was loaded with insecticide before the pilot took off from an agricultural strip on a property about 5 km north-east of Wickepin, WA to spray a crop of canola

Figure 1: Main Wreckage



### Pilot information

The pilot held a Commercial Pilot (Aeroplane) Licence, issued in June 1998, and a Grade 1 aerial agriculture rating. He had a total aeronautical experience of about 4,600 hours, most of which was accumulated in aerial agriculture operations.

1 The 24-hour clock is used in this report to describe the local time of day, Western Standard Time (WST), as particular events occurred. Western Standard Time was Coordinated Universal Time (UTC) + 8 hours.

## Aircraft information

The aircraft was a single-seat agricultural aircraft and was manufactured in the US by Air Tractor Inc. in 1989. It was powered by a single Pratt and Whitney PT-6A-15AG turbine engine, driving a three-bladed Hartzell propeller. The aircraft had a total time in service of approximately 9,300 hours.

## Weather conditions

The weather conditions at the time of the accident were reported to have been fine, with a light south-westerly wind, good visibility and a temperature of about 18°C.

## Wreckage and impact information

Debris from the aircraft's spray boom, and a substantial number of tree branches of between 50 and 150 mm in diameter, were found at the base of a 23 m high tree that was located at the north-western corner of one of the canola fields that were intended for spraying. The tree was significantly taller than the other trees that ran along the western boundary of the field. There was extensive damage to the leading edges of the aircraft's wings, consistent with the damage observed to the tree canopy.

Spray boom components were also found between the tree and the initial impact crater.

The aircraft impacted the ground about 150 m north of the tree, in an inverted, steep nose-down attitude and slid inverted for about 50 m, before coming to rest. Numerous items of aircraft wreckage were distributed along the wreckage trail. Damage to the aircraft was consistent with a high-energy impact and was not survivable.

The aircraft's hopper and fuel tanks were ruptured on impact with the ground. A considerable quantity of insecticide and fuel had spilled onto the site from the aircraft's hopper and wing fuel tanks respectively. There was no fire.

The engine's compressor blades and the blades from the propeller exhibited signatures consistent with the delivery of significant power at ground impact. Examination of the flight control systems verified their continuity prior to the collision with the ground. The wing flaps were found in the retracted position.

A number of aircraft items and components were recovered for subsequent technical examination.

## Recorded information

The aircraft was fitted with a satellite navigation system to provide guidance to pilots during agricultural spraying operations. Components from that system were recovered from the accident site for data download and analysis.

## Further investigation

The investigation is continuing and will include further examination and analysis of the:

- accident and impact sequence
- aircraft maintenance history
- analysis of recorded data
- pilot training records
- recovered aircraft items and components
- available meteorological information.