Aviation Safety Investigation Report 199603021

Cessna Aircraft Company Agwagon

21 September 1996

Readers are advised that the Australian Transport Safety Bureau investigates for the sole purpose of enhancing transport safety. Consequently, Bureau reports are confined to matters of safety significance and may be misleading if used for any other purposes.

Investigations commenced on or before 30 June 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with Part 2A of the Air Navigation Act 1920.

Investigations commenced after 1 July 2003, including the publication of reports as a result of those investigations, are authorised by the Executive Director of the Bureau in accordance with the Transport Safety Investigation Act 2003 (TSI Act). Reports released under the TSI Act are not admissible as evidence in any civil or criminal proceedings.

NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

| Occurrence Number: | 199603021 | Occurrence T | ype: Accident |
|---------------------------|----------------------------|--------------------|---------------------------|
| Location: | 5km S Tooraweenah, (ALA |) | |
| State: | NSW | Inv Category: | 4 |
| Date: | Saturday 21 September 1996 | | |
| Time: | 1615 hours | Time Zone | EST |
| Highest Injury Level: | None | | |
| Aircraft Manufacture | r: Cessna Aircraft Company | 7 | |
| Aircraft Model: | A188B/A1 | | |
| Aircraft Registration: | VH-JHZ | | Serial Number: 188-01678T |
| Type of Operation: | Commercial Aerial Ag | griculture - Other | |
| Damage to Aircraft: | Substantial | | |
| Departure Point: | Tooraweenah NSW | | |
| Departure Time: | 1615 EST | | |
| Destination: | Tooraweenah NSW | | |

Crew Details:

| | Hours on | | | |
|------------------|-------------------------|--------|--------------------|--|
| Role | Class of Licence | Туре | Hours Total | |
| Pilot-In-Command | Commercial | 3000.0 | 10000 | |

Approved for Release: Monday, November 11, 1996

The aircraft was engaged in aerial seeding, and was being operated from a grass strip. The pilot reported the takeoff direction was towards the north-west, to take advantage of a 12-15 kt wind blowing from slightly left of the takeoff direction. The aircraft became airborne with about 100 m of the strip remaining, but failed to accelerate and climb out of ground effect. Turbulence was encountered about 100 m beyond the end of the strip, which yawed the aircraft to the right, through about 60 degrees.

The pilot selected the hopper dump lever to the fully open position, in order to jettison the load, and attempted to manoeuvre the aircraft to avoid a line of trees. When it became apparent he would not be able to fly over the trees, he tracked towards the clearest area within the tree line. At a height of about ten feet the wings collided with small trees. The aircraft continued for a short distance before striking the ground and sliding to a halt. The pilot escaped without injury. He was subsequently told, by a person who had been located nearby, there had been a major wind gust/shift in the area at the time of the accident.

Aviation Safety Investigation Report 199603021

After carrying out a damage inspection of the aircraft, the pilot reported that about 90% of the load had remained in the hopper during the accident sequence. Whilst he described the load of seed and superphosphate as dry and free flowing, he considered that the design of the hopper base was not satisfactory, as the gate-like opening inhibited the free flow of solids. Had he been able to jettison a greater portion of the hopper load in the time available, he believed the resulting improved climb performance of the aircraft would have allowed him to avoid the trees.

The hopper base was described as a gate box type, principally designed for use with liquids. The pilot indicated that operators may use this style of hopper base for both liquid and solid applications during those times when the aircraft may be required to frequently change from one medium to the other.