1949
Commercfial Aerial topdressing begins

(Maber, J., 2009a)

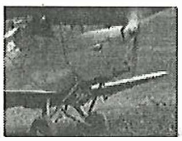
Story: Topdressing

1949

Page 5 – Commercial developments of aerial topdressing

Canterbury

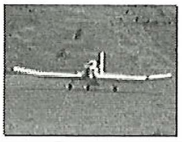
The first commercial aerial topdressing was in Canterbury. In May 1949, Tiger Moth ZK-ASO, piloted by John Brazier of Airwork (NZ) Ltd, applied superphosphate at a rate of 56 kilograms per hectare on Sir Heaton Rhodes's property Otahuna, at Tai Tapu. The plane carried 181 kilograms of fertiliser, and each trip took 7.5 minutes. The cost was calculated to be less than half of that for manual spreading.



The Tiger Moth

The Wairarapa

About the same date, L. T. Daniell, a Wairarapa farmer, arranged for 127 tonnes of fertiliser to be dropped on 11 different properties close to Masterton odrome. Within two months, 200 farmers had 101,000 hectares topdressed by air.

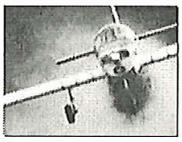


Hill-country airstrip

Adapted aircraft

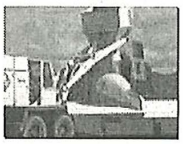
Before the end of 1949, war-surplus de Havilland Tiger Moths were being converted, with one cockpit transformed into a hopper capable of carrying 272 kilograms of fertiliser. These could fly from hill-country airstrips (rather than aerodromes) or the nearest flat land, reducing the turnaround time for each trip.

Aircraft including Piper Cub, Piper Pawnee, Auster and the de Havilland Beaver aircraft were later used. On the East Coast of the North Island, severe soil erosion threatened pastoral farming, and aerial topdressing provided a way to sow and maintain new pasture.



The Fletcher topdressing aircraft (1st of 2)

By any measure, the developments in 1949 proved a turning point for New Zealand agriculture. Fertiliser use expanded, and stock numbers doubled over the next 20 years.



Loading fertiliser

Fill 'er up

Each fixed-wing topdressing plane has a truck driver who follows it around from farm to farm, using a loader to scoop fertiliser from a concrete bin. The driver fills a bucket fitted with a canvas or plastic chute, while the plane is flying. When it lands, he releases the fertiliser through the chute and into the aircraft hopper. This takes only a few seconds, and the aircraft is ready for take-off again.

Topdressing companies

By the end of 1949 five firms were spreading fertiliser: Airwork, James Aviation, Aircraft Services, Gisborne Aerial Topdressing (later Feildair), and Southern Scenic Airtrips. Wanganui Aero Work was founded in 1950. Over the next five years another 50 companies joined in, and by 1958 there were 73.

An ideal aircraft

As aerial topdressing expanded, so did the search for the ideal fixed-wing aircraft. In 1952 the Civil Aviation Department set out specifications that included, not surprisingly, the ability to operate from short airstrips in variable weather conditions while carrying at least 1,000 pounds (454 kilograms) of fertiliser. Includ 23-point list were initial climb rates of 300 metres per minute with a full load, good ground-handling r the pilot in the event of a crash.

3rd