

Thomas William Adams 1842-1919

Early farm forester

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Abstract

*T.W. Adams took up virgin tussock-grassland at Greendale, Canterbury in 1865 to become the first farmer in the district. From 1869 and for most of the rest of his life he planted trees there for shelter, fuel, timber and amenity. His systematic and comprehensive planting trials showed the promise of a range of species, particularly *P. radiata* and *P. laricio* which he recommended for extensive planting beyond Canterbury, so influencing the choice of species used in the first afforestation boom which started in the mid-twenties.*

For the last 16 years the T.W. Adams Scholarship in Forestry has supported postgraduate students at the School of Forestry, University of Canterbury. It is a worthy way of commemorating an early Canterbury settler who contributed much, provincially and nationally, to the formative stage of New Zealand forestry.

Thomas William Adams was born in 1842 in the English village of Graveley, near the border of Huntingdonshire and Cambridgeshire where his people had lived for generations. The rural environment with many woods and thickets for a boy to explore made a strong impression on young Adams and stimulated a deep interest in natural history. He received, for the times, a good if basic education, first at a local private school and then at the Borough Road Normal School in London which was supported by the British and Foreign Bible Society. He was brought up in a strongly Baptist home and became deeply involved in Baptist Church affairs later in New Zealand. Thomas' father was a grocer and part-time farmer and the lad received farming experience on the small family holding which was to stand him in good stead later in New Zealand (P. Adams, 1990).

In 1862 at the age of 19 and accompanied by a cousin, Adam sailed for Auckland. He soon moved to Canterbury where he found farming work with Thomas Pannett, an earlier settler. A trip with horses and drays across the plains to Kowhai Bush near Springfield to collect timber gave Adams the chance to survey land on which to settle. In 1865 he arranged the purchase of a rural section of 40 ha at Greendale, where he was the first farmer. He took up his block of virgin tussock-land alone with bundles of straw on his dray to provide him with some sort of shelter for the first winter on the exposed, treeless site. He set about to build a sod whare, plough land to sow his first crops and fence them with sod walls. He married in 1867 and a daughter was born the following year. The next year tragedy struck when his wife drowned accidentally. In 1872 he married his first wife's sister who was to bear him three daughters and five sons. The Greendale district prospered with the development of mixed farming and Adams with it. His holdings of land increased and eventually his five sons took over farms which they leased from their father before buying them (P. Adams, 1990). But there was much hard work required before that stage of his life was reached.

It was clear to Adams right from the start that tree planting was essential at Greendale for shelter, fuel and farm timber. In the winter of 1866 he planted his first tree there, species unknown. But we do know that in 1869 he planted an English oak and raised radiata pine seedlings. He planted continually for much of the rest of his life. In 1873 and 1877 he established two small plantations around his homestead. During the 1880s he established a further 11 on his other blocks of land. By 1910 his plantations covered over 60 ha (P. Adams, 1990). In addition, Adams supervised the planting of local county reserves and supplied some of the trees for others (Anon., 1965), these stands doubtless contributing to the early resources of the Selwyn Plantation Board.

Afforestation with exotic species last century was often characterised by the hit and miss philosophy of trying everything everywhere. Inevitably many mistakes were duplicated. Adams was among the first to conduct planting trials systematically, to keep good records and to communicate his results about the suitability or otherwise of many species for Canterbury. Most of his findings were published between 1886 and 1918 in the New Zealand Country Journal and its successor, the Journal of the Canterbury Agricultural and Pastoral Association. Others appeared in the Transactions of the New Zealand Institute. His mana in forestry circles is evidenced by eight of his papers being published in the New Zealand Official Yearbook between 1898 and 1905, and by a paper being included in H.J. Matthews' definitive (in 1905) Tree Culture in New Zealand.

Adams corresponded with and sought seed from botanists and collectors all over the world. He shared the seed sent from overseas with nurserymen and enthusiastic amateurs in New Zealand. By 1908 there were 800 species of trees and shrubs in the arboretum on his homestead block, mainly introduced (P. Adams, 1990). He read widely and it is clear from his writings that he possessed a good understanding of tree identification and botanical nomenclature. Adams would often retire to his 'den' at night and immerse himself in his studies and correspondence about trees, sometimes so deeply that his sons found it difficult to get decisions from him about work on the farm next day. As time went on and he observed how the various species he had planted coped with the rigours of drought and frost at Greendale he was able to recommend with increasing confidence tree species best suited to Canterbury. First and foremost were the pines, including *P. radiata* and *P. laricio*, with the latter most strongly favoured (T. Adams, 1891a). He pointed out the premier growth rate of the former and its suitability for many parts of New Zealand. (Indeed, radiata pine seedlings which he planted in 1872 had achieved heights of 36 metres and diameters of 150 centimetres by 1910.) He promoted also the widespread planting of the latter (T. Adams, 1891a; 1913). Other species firmly recommended for Canterbury were *Cupressus macrocarpa*, *Acacia dealbata* and oaks (T. Adams 1891b; 1896). He was enthusiastic about the latter (T. Adams, 1914): "The ideal place to plant an oak is somewhere it will give summer shade and autumn fruit to animals. On windy days the sheep will be on the look out for acorns as they fall, and all through the summer, as the day gets warm, they will be seen making for the shade, and when lying there enjoying the position, they make a picture of a pastoral scene equal to anything imagined by the greatest artist, living or dead." In 1915 he exhibited the acorns of 30 species and the leaves of 63 species of oak, all grown at Greendale (T. Adams 1915).

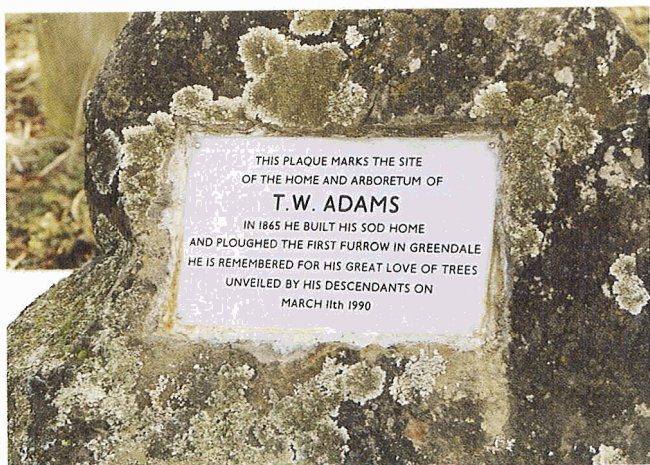
The author, Peter McKelvey, was formerly Professor of the School of Forestry, Canterbury University.

Frost was especially limiting for eucalypts at Greendale and he found the most resistant to include *Eucalyptus pauciflora*, *E. gunnii*, *E. amygdalina* and *E. stuartiana*, with this last exhibiting the fastest growth (T. Adams, 1905). Adams planted native species too, trying 50 at Greendale, of which totara, cabbage tree, kowhai and matipo grew well; broadleaf, lancewood, fuschia and black birch (sic) were among those species which did not stand the severe droughts experienced. He regarded the native trees as being more ornamental than commercial and "singular rather than beautiful" (T. Adams, 1897).



Memorial plaque to T.W. Adams at Greendale, Canterbury. (Photo D.J. Mead)

Adams experimented with methods of establishment over the years. In the eighties he started forming plantations by sowing. He found that he got better results by stratifying the seed beforehand. Seeds of wattles and pines were first soaked in hot water and kept in moist sand for about a fortnight. Before the actual sowing the seeds of these species, and eucalypts too which were also stratified, were well mixed in dry fine sand, or even dust, to get the best spread during drilling. Eucalypt seed was sometimes sown with mustard to identify the rows more easily and facilitate weeding (T. Adams, 1886; 1905). Stands of oaks were established by ploughing a furrow and dropping the acorns in. Root crops could be grown for a few years between the sown furrows (T. Adams, 1914). The acorns of many species of oaks were imported from overseas, often North America, and he found that these failed until he suggested that they be sent packed in tins with damp moss (T. Adams, 1896). As time went on Adams seemed to plant more and sow less.



Mixed shelterbelt and arboretum planted by T.W. Adams at Greendale, Canterbury. (Photo D.J. Mead)



Large cedar near the site of T.W. Adams' homestead at Greendale. (Photo D.J. Mead)

Many of his early plantations were mixtures. He advocated planting *Pinus laricio* and *P. coulteri* at two yards by two yards in the proportion of three of the former to one of the latter. He was keen also on a mixture of *P. radiata* and bluegum because it produced relatively quickly firewood, stakes and poles, stakes of bluegum being particularly useful for "dividing turnips", (T. Adams, 1891a).

Adams' systematic trials with timber species have tended to overshadow his work with orchard species, which also was impressive. He had about 300 varieties of apples in his experimental collection and in 1886 displayed over 200 of them at a fruit show in Christchurch. He promoted more extensive planting of apricots in Canterbury and also mulberry. Shelter belts of *P. radiata* and *C. macrocarpa* were recommended to be placed around orchards. (T. Adams, 1883; Anon., 1886) Adams was appointed a member of the 1913 Forestry Commission whose wide terms of reference indicated the recognition by the Government of the day that they needed informed advice on a national forestry policy. Another member of the Commission was the notable botanist Dr. Leonard Cockayne whom Adams had known well for ten years or more. From today's standpoint some of the recommendations of the Commission seem curiously tentative. But they could not have been otherwise because, in those days of inadequate maps and few foresters, there were no accurate data for the timber resources of the native forests and so there could be no firm proposals for future timber supplies. However, the influence of Adams is discernible from the list of species recommended for extensive planting in State plantations, in which *Pinus radiata* and *P. laricio* were prominent. Because the Commission was not able

to determine with any accuracy the extent of State planting required it had to content itself with a 'guesstimate' of annual planting needed and list of areas which might be suitable for afforestation (Commission on Forestry, 1913).

Adams' contribution to forestry was formally recognised near the end of his life, both overseas and in New Zealand. He was elected an honorary member of the Royal British Arboricultural Society. In 1918, the year before he died, he was made a life member of the New Zealand Forestry League, an articulate organisation dedicated to the effective management of New Zealand forests (P. Adams, 1990). In his obituary for Adams, Cockayne (1919) paid a glowing tribute to his forestry work: "... his researches with regard to Monterey pine (*Pinus radiata*) as a timber tree can without hesitation be declared the most important advance which forestry has made in New Zealand up to the present time, and one which will eventually add great wealth to the country." And further: "Indeed, Mr Adams through his teaching regarding the value of the Monterey pine materially modified the forestry policy of the Dominion". This acknowledgement has been recently criticised by Roche (1987) who termed it extravagant praise for the time. However, it does seem likely that Adams' careful planting trials with, inter alia, *P. radiata*, his publication of the impressive results, and also his prediction of the usefulness of the timber (T. Adams, 1891a) did encourage the prominence of the species in the first planting boom which commenced in the mid-twenties. There can be little argument about his pioneering role in farm forestry; Adams' concept of how planting for shelter, fuel, timber and landscaping can enhance agriculture (T. Adams, 1896) is now well and truly implemented all over New Zealand.

His other great interests were the Baptist Church and education, and he contributed well to both in Canterbury. With regard to the latter, he was elected a governor of Canterbury University College in 1897, a position he held until his death at Greendale in 1919. His will contained a bequest to Canterbury College of "£2000 and 98 acres of land" to be used for the establishment in the college of a school of forestry (Gardner et al, 1973). The land was the first block he had bought and contained his house, arboretum and many of his experimental plantations. (A survey of the latter in 1981 identified 700 individual trees comprising 196 species and varieties (Bannan, 1981).

The response of the College was to establish a Diploma in Forestry in 1921 and appoint a lecturer - C.E Foweraker - in Forestry and Botany. In 1924 the Senate of the University of New Zealand recognised Canterbury College as operating a School of Forestry and authorised an annual grant for its maintenance. This ceased in 1933 because of Government retrenchment during the Depression and the School was closed down during the following year. (Gardner et al, 1973). In 1967, when the second Canterbury School of Forestry commenced, there were still funds available from the bequest, including accumulated rentals from the 98 acres (40 ha) of land. In 1973, a year after postgraduate studies commenced in the School, the University Council agreed to use these to establish scholarships, commemorating Adams, to support doctoral and masterate students in the School.

Adams was a stocky, quiet, determined man. Perhaps not all his family shared his passion for forestry for there are reports that sometimes his sons would have preferred to play sport on Saturdays rather than plant trees. However a picture of a dour martinet is inappropriate because reading some of his less formal writings, published and unpublished, gives the impression of friendliness and good humour. For example, a diary note described how, on the Lyttelton-Wellington ferry in 1889, he enjoyed a game of deck quoits with three Maori footballers returning from their English tour. Another, written on a visit to Auckland 27 years after he first landed there virtually alone, claimed that, "now I had friends to welcome me everywhere". Probably he was no stricter than other parents of the time.

There is no doubt though that he was energetic and painstaking, qualities which helped establish him as one of the most important of our early farm foresters.

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Southern pine lumber for Korean housing

A booming Government backed housing programme in Korea has enabled a New Zealand forestry company to obtain added value from a minor pine species.

Forestry Corporation of New Zealand Ltd has a number of contracts with their regular buyers for the supply of 50,000 cubic metres of Southern pine lumber a year, for use in the construction industry.

The Koreans have previously imported Southern pine sawlogs and processed it into construction lumber themselves, but demand brought about by the booming housing market has meant Korean sawmills cannot keep up.

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