

# Award of Associate of Honour of the Royal New Zealand Institute of Horticulture (AHRH)

## Russell George Lowe



RNZIH President Keith Hammett (left) congratulating Russell Lowe (right) for receiving his 2020 Plant Raiser medal and 2021 Associate of Honour certificate at the awards ceremony. Photo: Jack Hobbs.

Russell Lowe has spent all his working life with the Department of Scientific and Industrial Research (DSIR) and its successors, HortResearch and, ultimately, the New Zealand Institute for Plant and Food Research Ltd (Plant & Food Research). He recently retired to become an Honorary Fellow of Plant & Food Research.

After completing a BSc in chemistry at the University of Canterbury, he joined the staff of Plant Diseases Division, DSIR, as a Technician at the Appleby Research Orchard in Nelson in March 1969. He soon proved his worth and was promoted to Technical Officer in 1972.

The same year, he transferred to the new research orchard at Te Puke as Officer in Charge. It was an orchard in name only, as there were no fruit trees. There were some young shelterbelts established, maize plantings on most of the flat land, a huge pile of kiwifruit posts and a new house. The first orchard office was quickly established in one of the spare bedrooms. There was no fax, no photocopier, no computer, just a party telephone line shared with two neighbours. Russell's late wife, Veronica, was the honorary telephone operator.

Russell remained Officer in Charge of Te Puke for 15 years and thus oversaw many of the early developments at the orchard.

Furthermore, his practical knowledge of kiwifruit growing is unrivalled and he assisted many staff as they started working on kiwifruit. He takes a particular pride in being part of a successful development which is relevant to research interests and responsive to the needs of local growers. Indeed, he has played a full part in the Te Puke community and has been a most effective public relations and extension worker. The early research trials he helped establish provided growers with much needed information as the industry rapidly expanded.

Russell was transferred to Scientist in 1984, as he became more and more involved in kiwifruit breeding. His knowledge of the practical aspects of growing plants, combined with an understanding of the needs of growers and marketers, soon produced outstanding results.

In 1991, he and a colleague, Hinga Marsh, selected 'Hort16A' as a promising vine from within a block of about 600 seedlings resulting from a cross made by Mark McNeilage in 1987. 'Hort16A' was registered in 1995 and its fruit, marketed as Zespri® Gold Kiwifruit, were launched on the international markets in 2000. He also selected the polleniser cultivars 'Meteor' and 'Sparkler' to partner 'Hort16A'. The disease, bacterial canker of kiwifruit, caused by *Pseudomonas syringae* pv. *actinidiae* (Psa), which was first detected in New Zealand in 2010, eventually meant that 'Hort16A' could not be grown commercially in this country. With the loss of 'Hort16A' it is easy to forget the remarkable contribution that this cultivar made to the confidence and the profitability of the kiwifruit industry. Over its commercial lifetime it earned more than \$3 billion for New Zealand. 'Hort16A' was also revolutionary in that up until its arrival, kiwifruit were hairy on the outside and green-fleshed and somewhat acidic inside. The new cultivar, with very fine hairs on the skin and yellow flesh, helped cement the world leadership

of the New Zealand kiwifruit industry. Russell's participation in the development of this cultivar is among the most important of his contributions during his long career.

The loss of 'Hort16A' was a tragedy for New Zealand growers. The surprisingly rapid recovery of the industry from the devastating Psa crisis can be ascribed to several causes but probably the most important was the introduction of a new cultivar with yellow-fleshed fruit, a cultivar that was much less susceptible to Psa. It was most fortunate that the development of new kiwifruit cultivars was well underway.

A series of planned crosses ended in one made by Russell Lowe in November 2000. A seedling had been selected in May 2005 based on fruit weight, fruit shape and superior taste. Fortuitously, this selection, 'Zesy002', proved to be reasonably tolerant of Psa. It was therefore chosen as the replacement to 'Hort16A' and now it is the most valuable product of the New Zealand kiwifruit industry. 'Zesy002' was released in 2010, marketed as Zespri SunGold™ Kiwifruit, and in 2019 more of its fruit were supplied to consumers than 'Hayward' kiwifruit. By 2020, more than 5,000 ha of 'Zesy002' orchards had been established and produced a record 74 million trays of the yellow-fleshed kiwifruit.

In December 2019, the Zespri Board approved the commercial release of a selection Red19 (R019) (registered as 'Zes008'), announcing an initial allocation of 150 ha of licence. The fruit are marketed as Zespri Red™ Kiwifruit. Don Mathieson, Chief Executive of Zespri said: "This fruit has a deliciously sweet berry-tinged flavour and vibrant red flesh ... Adding a red kiwifruit variety to our range of premium kiwifruit products provides Zespri with an opportunity to further compete for market share ... and ultimately grow our industry's share of the global fruit market." The Chairman of Zespri, Bruce Cameron,

agreed: “Russell’s success in developing this red cultivar has again enabled the New Zealand kiwifruit industry to provide the market with a new, distinctive, great-tasting fruit which will strengthen kiwifruit’s share of the global fruit bowl in the years to come.”

In addition to these successes, Russell identified ‘Kaimai’ as a rootstock, selected the green-fleshed ‘Tomua’ and the associated pollenisers, ‘King’ and ‘Ranger’, the polleniser ‘Russell’, and he participated in the programme that led to the selection of the rootstock ‘Bounty71’.

Russell has developed longstanding and valuable relationships with research colleagues in China, especially at the Sichuan Provincial Natural Resources Research Institute based in Chengdu. These relationships have contributed to a valuable exchange of plant material, with lasting benefits for the

New Zealand kiwifruit improvement programmes.

The successful breeding, selection and promotion of a new cultivar involves cooperation between researchers, growers, and marketers. The acceptance by industry and the successful marketing of a new cultivar is the ultimate attainment. To be involved in the selection of a remarkably successful cultivar such as ‘Hort16A’ is the dream of any plant breeder. To follow this up with the breeding and selection of another “game-changing” product such as ‘Zesy002’ and then to have another selection ‘Zes008’ accepted for commercialisation shows that the original selection of ‘Hort16A’ was not simply a lucky chance. Russell Lowe can be counted as one of New Zealand’s most successful fruit breeders. He ranks with giants of New Zealand horticulture as Hayward Wright and Don McKenzie. Russell Lowe has made huge contributions to the kiwifruit industry and to the

welfare of New Zealand. These have been recognised by the kiwifruit industry in awarding him in 2012 the inaugural Hayward Medal and the 2020 Kiwifruit Innovation Award. He was a leading member of Plant & Food Research’s Psa Response Team that won the Prime Minister’s Science Prize in 2017. In 2020, the RNZIH awarded him the Plant Raisers’ Award. In early December 2020, he was presented with a Lifetime Achievement Award at the Science New Zealand National Awards.

For his exceptional contributions to the New Zealand kiwifruit industry, especially the development of outstanding cultivars which have enabled the rapid growth of the industry, we now congratulate Russell George Lowe on being elected an Associate of Honour of the Royal New Zealand Institute of Horticulture.

**Citation prepared by  
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## Erratum

The printed version of the December 2020 *New Zealand Garden Journal* (ISSN 1173-7425) was mislabelled Vol. 24 (No. 2). The correct number is Vol. 23 (No. 2).

The PDF (online) version of this issue (ISSN 1179-9153) will be correct when it is uploaded to our website ([www.rnzih.org.nz](http://www.rnzih.org.nz)).

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