

Foreword

Publication of this Special Edition of *Animal Production Science* titled 'Genetics and Management to Improve Productivity in Australian Beef Herds' marks a very special milestone in the life of the Beef Cooperative Research Centre (Beef CRC). This is the tenth Special Edition or Research Front¹ published by **CSIRO PUBLISHING** with Beef CRC scientists as guest editors and/or Beef CRC results highlighted throughout the Edition. This Issue also becomes the second Open-Access volume published on behalf of Beef CRC, the first being 'Meat Standards Australia', Volume 48, Number 11 in 2008. Open access is very valuable to Beef CRC because it enables other livestock researchers globally and Australian industry end-users in particular, to freely and readily access Beef CRC's research results. Ideally, it then encourages enhancement of scientific knowledge and better development of beef enterprises.

Especially though, this Special Edition marks the culmination of two very large projects that were conducted across northern and southern Australia between 1997 and 2006, as part of Beef CRC's second phase of research, known as the Cooperative Research Centre for Cattle and Beef Quality.

Beef CRC's first 7-year phase (1993–2000) had answered the critical question: 'Can we guarantee beef eating quality from Australia's vastly differing and extreme beef production systems?' Results from that first phase clearly demonstrated that, with careful attention to critical control points along the full length of the production and processing chain (literally from conception through to consumption), Australian beef producers could reliably and consistently deliver beef products that met

consumer demands for beef palatability. Use of Beef CRC results to underpin development of Meat Standards Australia (MSA) delivered the world's first meat grading scheme based on consumer-specified palatability preferences. MSA still remains a world-first of which Australia can justifiably be very proud.

Having answered that first crucial question though, additional questions remained. Principally, we needed to further understand whether we could change carcass and beef quality attributes by genetic selection or through management processes without unduly compromising key fitness traits like reproductive performance and adaptation to environmental stressors. We also needed new scientific knowledge to confirm, or otherwise, the predictability of beef cattle growth and carcass compositional changes during that growth, to better predict and meet stringent market end points. We needed to understand the appropriate weightings given to genetics and management practices to most reliably improve the profitability and productivity of beef herds across northern and southern Australia. The research described in the papers in this Special Edition was specifically designed to answer these additional questions.

As leaders of the major second-phase Beef CRC northern and southern projects respectively, we are very pleased to commend these research results to you, knowing they will contribute greatly to improved profitability and productivity of Australian beef businesses over coming years.

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¹*AJEA* 2008, Volume 48, Number 11, 129 pages; *AJEA* 2008, Volume 48, Numbers 1 and 2, 264 pages; *AJEA* 2007, Volume 47, Number 7, 25 pages; *AJEA* 2006, Volume 46, Number 2, 144 pages; *AJEA* 2005, Volume 45, Numbers 7 and 8, 304 pages; *AJEA* 2004, Volume 44, Number 7, 80 pages; *AJEA* 2004, Volume 44, Numbers 4 and 5, 145 pages; *AJEA* 2001, Volume 41, Number 7, 255 pages; *AJEA* 2000, Volume 40, Number 4, 150 pages.

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