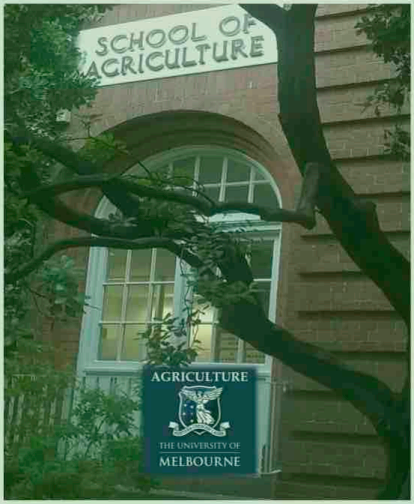
Agricultural Education

in Victoria & the Faculty of Agriculture, University of Melbourne



Lindsay Falvey

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Snow Barlow, Janet Beard, Malcolm Hickey, Frank Larkins, Kwong Lee Dow, Jeff Topp, Robert White & Nigel Wood

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OAFS

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Foreword

This history describes a proud lineage replete with its vicissitudes of fortune. It looks back across the past of what is now the Faculty of Veterinary and Agricultural Sciences. This is a great Faculty and I am proud to be the current Dean. I came to this role from outside the University of Melbourne, and indeed from outside Australia, attracted by the achievements of the past and the opportunities of the future.

The opportunities are manifold and the new Faculty is poised to expand its teaching, research and engagement in agriculture, food and animal health. Our focus is firmly on a technologically sophisticated future with significant social and economic implications for Australia and the world. The global challenges brought by an expanding world population, environmental change, globalisation of trade, diseases and pests and the struggle to maintain healthy water, air, soil, plants and animals and the imperative of securing sufficient food, have once again increased the prominence and value of studies and research in agriculture and food sciences.

The future we are constructing in the Faculty certainly springs forth from sound foundations but as this history notes in its closing chapter, 'the past will inform the future'. Understanding the past has the potential to inspire, embolden and caution our decisions. How the foundations in agricultural science on which we are building were established across a period of more than 100 years, the decisions that were taken, the milestones along the way and

the people who led and contributed are the subject of this fascinating book.

I welcome this publication and I am delighted to support it. I congratulate Professor Lindsay Falvey and his co-authors on their work and commend the Society of Old Agricultural Fellows for its initiative in undertaking this project.

Prof John Fazakerley
Dean, Faculty of Veterinary and Agricultural Sciences

Understanding this Book

Terminology

Throughout the book, 'Faculty' denotes the Faculty of Agriculture in its various guises and appellations in the University of Melbourne since 1905. 'University' refers to the University of Melbourne, and abbreviations of degree titles follow the University's standards in the main,[1] after encountering similar challenges about nomenclature to those that apparently faced the authors of Faculty and University documents referred to herein. Names, acronyms and abbreviations are included in the Index; common acronyms repetitively employed include CTEC, VET and TAFE. CTEC refers to the Commonwealth Tertiary Education Commission, the national government level funding vehicle for higher education in universities until about 1987. VET refers to the Vocational Education and Training sector, which is serviced by TAFE institutions that are accredited through the Australian Qualifications Framework (AQF) and funded through State government. TAFE institutions may also offer some limited higher education programs. Some short courses in the VET sector may not be funded by government or accredited by the AQF.

Contributions

The work results from the Society of Old Agriculture Fellows (OAFS), an informal gathering of retired members of the Faculty with a concern for the Faculty, the future of agricultural science and the reputation of the University. The

OAFs include; Snow Barlow, Janet Beard, Lindsay Falvey, Malcolm Hickey, Frank Larkins, Kwong Lee Dow, Jeff Topp, Robert White and Nigel Wood – each of whom has contributed to this work. In addition, significant contributions in various forms have been made by Adrian Egan, anonymous, John Freebairn, Ken Hinchcliff, Jim Pratley, Rick Roush, Margaret Sheil, Hamish Russell, Ron Slocombe, Teresa Tjia, the University Archives and the State Library of Victoria – as well as by many other persons and organizations concerned with the Faculty and agricultural education in Australia. Of particular value have been interviews and documents kindly provided by Kwong Lee Dow, Bill Malcolm, Margaret Sheil and Nick Uren. I am also indebted to the informed specialists who have critiqued the manuscript – the eminent historian Stuart Macintyre who vastly improved the text, correcting many errors and style, and Carolyn Rasmussen – both of whom have written more learned histories of the University. And it is with gratitude that I also acknowledge John Fazakerley, the Dean of the Faculty from the point at which this history concludes, for supporting this publication and contributing its Foreword.

Prefatory Note

Institutional histories can be uninteresting to all but a few who have passed through the institution concerned. Yet institutions constitute the fabric of a civilization and their histories provide important memetic markers in a civilization's evolution. Where the institution concerned is a university faculty – as in this case – histories may reveal society's changing values. This history relies on the views of informed participants raised in the integrated field of agricultural science, and who by nature and training attempt to reduce personal bias and to place their observations into

a living context. To the extent that this is possible it accords with Söderqvist's observation that 'the passions of scientists are not social products but integral elements in the realization of existentialist projects.'[2] The tone of this volume is indeed existential in two senses; the life and near deaths of agricultural science education, and the absolutely critical need for a society to continuously sustain its ability to feed itself. Those mentioned in this history share both worldviews.

As stated in other works, I believe it is responsible for authors to acknowledge their relationship to their subject so that a reader may detect bias. My colleagues and I who constitute the Society of Old Agriculture Fellows have been associated with the Faculty for various periods through the past five decades. We know the Faculty and to a significant extent the wider University and its management. Extant leaders have each written of their own eras and their colleagues have then edited each piece before it served as a source document for the present work; these essays are listed in the References section. The approach aimed to present, so far as is possible, an unbiased history. Nevertheless, participant history has a long lineage that goes back as far as Thucydides;[3] as it is not without hazards a reader will immediately observe that 'the subject's distortion of history may arise from a selective revision more favourable to the subject's participation, or alternatively a modest subject may be loath to describe fully their role in particular achievements.'[4] With those possible biases, the history reviews more than 130 years of agricultural education in Australia's most intensively agricultural State of Victoria, of which 110 years might be referred to as agricultural science education.

In considering the evolution of the Faculty as a reflection of our society's values, it becomes clear that agriculture and food production has become marginalized from the dominant urban-centric culture. This has led to society sometimes failing to act in its own interests. Examples abound; in conflicts between environmental idealism and food production, in misunderstanding the reliance of food production on continuous complex scientific research, and in neglecting to protect the integrated basis of agricultural science education across much of the natural and social sciences. Just as the foundation myths of our society rely heavily on agricultural metaphor in such words as 'growth' and 'culture', so our neglect of agricultural science may be a metaphor – or even a reflection of – our faltering European understanding of our continent's fragility. We are learning how to live in this environment, and well-educated persons in agricultural science have assisted this adaptation – it is to be hoped that as a society we continue to recognize this essential nexus.

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Chapter 1

Introduction

The history of agriculture and related education associated with the University has followed a winding path catering for regional, national and international food and environmental education and research in a politicized economic sector. This history spans 150 years, beginning before the University's Faculty of Agriculture existed. It is based on documents used in a previous Faculty history, a wide range of additional source materials and, for the recent four decades, has been supplemented by extant memories. In relating its history, the Faculty through its diverse iterations is placed in its context within the University and other providers of agricultural education.

The story of agricultural education in south-eastern Australia begins in the 1870s and proceeds through early agricultural schools-cum-colleges of the 1880s to the 1905 creation of the Faculty at the University of Melbourne, which itself had been established in 1853. The story continues through the complications of the 1968 opening of a new and neighbouring university that provided agricultural science education, and the successors of the agricultural colleges with their more practical courses; it then chronicles the merging of the colleges into the Faculty in 1997, as described in an earlier history entitled 'Land and Food'.[5] Throughout its chequered history, the Faculty has variously been known as; the School of Agriculture, the Faculty of Agriculture, the Faculty of Agriculture and Forestry, the Faculty of Agriculture, Forestry and Horticulture, the Institute of Land

and Food Resources, the Faculty of Land and Food Resources, the Melbourne School of Land and Environment, and currently, the Faculty of Veterinary and Agricultural Sciences. In each iteration the appellation 'agriculture' has appeared in either the name of the Faculty or one of its departments. While modern institutional histories seek themes to engage their audiences, eschewing chronologies based on leaders' incumbencies, this one follows decanal periods. And in tracing history chronologically, other providers of agricultural education in Victoria are introduced in the relevant eras. The major emphasis of this work reflects the dominant presence of the Faculty as the major agricultural science provider in the State and oftentimes the nation.

The south-east corner of the Australian continent has been blessed with a combination of soils and climate suitable for modified versions of the temperate agriculture with which its immigrants were familiar. Once proclaimed as a separate Colony in 1851, Victoria was a major agricultural producer in the small Australian economy, and the ongoing process of adapting to the non-European environment began in earnest. Gold quickly enriched the Colony enabling Victoria to become the wealthiest in Australia – a position it maintained as gold income declined and agricultural wealth and urban activity grew. With closer land settlement through the Selection Acts and the policy of promoting and assisting agriculture from the 1860s, agricultural production grew until the Colony, while representing some three percent of Australia's area, produced the largest rural export income. It was therefore logical that Victoria would quickly move to establish agricultural colleges and that it would go on to create a larger agricultural education network than other Colonies/States; this is indicated in the decadal listing

of the main agricultural education institutions by State in the following Table in which Victorian institutions are highlighted in bold font. However, having the benefits of land, climate, wealth and multiple agricultural education institutions did not lead to rational cooperation or integration across institutions or even across the decades.

Agricultural education in Victoria has experienced alternating fortunes and compromised mergers, usually in attempts to catch up to perceived past or current needs, or to rationalize institutional overheads and offerings. The vision and energy of the 1870s was sometimes less evident in public service approaches to the management of the agricultural and related colleges over their century-long history. And although the University opened its Faculty of Agriculture in 1905, it cannot be said to have approached its potential until the 1920s. Developments in the other States with less agricultural education infrastructure followed much the same pattern.

Apart from primary and secondary schools, Australian education may be traced through Schools of Arts, Mechanics' Institutes and Technical Colleges that had spread across European-occupied Australia by 1840, having begun in Hobart in 1827.[6] Supported by Colonial governments these institutes achieved significant local business and popular support, unlike the parallel agricultural colleges that soon followed. In such a young country, agricultural and mechanical education was more an imported copy than designed to suit the new environment. Combined with farms being family undertakings, it was perhaps inevitable that practical skills were to be 'learned on the job' in what was very similar to an apprenticeship approach.

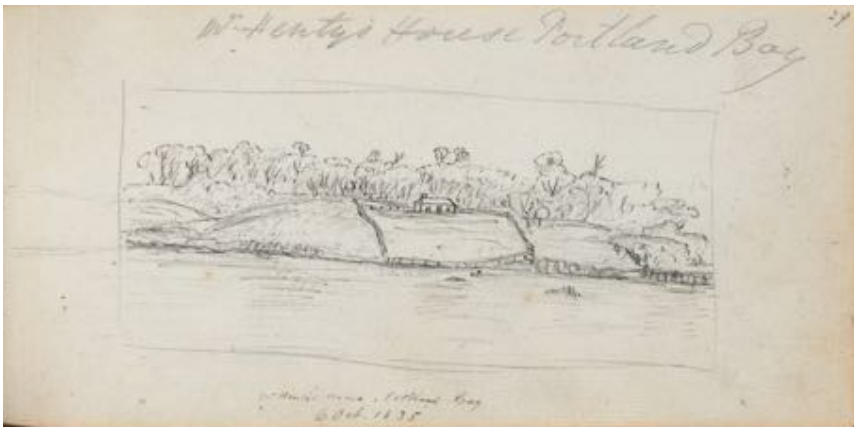
Agricultural Education Institutions by Decade of Creation[7]

Decade	Agricultural High Schools	Agricultural & Vocational Colleges	Universities
1850			Sydney **Melbourne**
1870			Adelaide
1880		Roseworthy SA **Dookie Vic** **Longerenong Vic**	
1890		**Burnley Vic** HAC NSW WAC NSW	Tasmania
1900	Hurlstone NSW		
1910	Urrbrae SA		Queensland Western Australia
1920	Yanco NSW	Muresk WA	
1930	Farrer NSW	**Dairy Research Vic**	
1940	Denmark WA		
1950	James Ruse NSW Harvey WA Cunerdin WA		New England
1960		**Glenormiston Vic** **Marcus Oldham Vic** Yanco NSW Tocal NSW Longreach Qld Emerald Qld	QIT (→ Central Queensland) **La Trobe**
1970		**McMillan Vic**	James Cook Murdoch
1980			Curtin Charles Sturt Western Sydney
1990			Southern Cross
2010	Lighthouse schools NSW		

The attitude of learning by doing that became so deeply entrenched that it continued to be promoted into the late 20th century to the detriment of education levels in the sector; the Victorian dairy sector, for example, enthusiastically re-embraced the idea in the 1980s. This tendency to hark back to old approaches in periods of change might even be traced back in agricultural education to the early decades after European settlement of Australia when the vision for education was as a means of rising from penal colony origins. After four decades of adjusting to Australia's different natural and social environment, imported class distinctions from 150 years earlier mired progress with beliefs 'that the child of a blacksmith did not need any more education than what was necessary for him to become a blacksmith, the child of a farmer only what was necessary for him to be a successful farmer'.[8] With such a history, it is little wonder that informed commentators such as Jim Pratley and Cameron Archer suggest that agricultural education has constantly 'missed the boat'.[9]

As this history of the Faculty and agricultural education in Victoria implies, the anomalous status that society has accorded agriculture has served neither society nor the economy as well as it might have. The story that unfolds through the Faculty's highs and lows might also be seen as a mirror of ebbs and flows of Australians coming to an accommodation with their continent. Early settlers, such as the Hentys, learned by trial and error, producing startling innovations as they adapted European agriculture to the new land with its fires, floods and droughts. Over the next century or more, adaptation to the environment and to society's attitudes to such important aspects of agricultural science as animal welfare and environmental care, defined the modus operandi of agricultural science. But such

constant adaptation may not accord with the worldview of the overwhelmingly urban Australian population today. The observations made here come easily to agricultural scientists, but if such understanding is not widespread as seems the case with rising urban bias in national attitudes, then the task of agricultural science education remains huge – and of national importance.



The First Permanent European Settlement in Victoria, the Henty Farm at Portland[10]

This book is presented chronologically, beginning in Chapter 2 with a discussion of the events that preceded creation of the first agricultural education facility in the State. The following Chapter introduces the imported legacy of agricultural science education that led to the creation of the Faculty. Subsequent chapters treat the Faculty's history according to periods of different Deans and include discussion of the parallel activities of other agricultural providers. A final Chapter offers comments on the history and future of the Faculty and agricultural science education.

It is a colourful history, replete with persuaders, rogues, visionaries, politicians, academics, entrepreneurs and farmers, as is well represented in Samuel Clements' (Mark Twain's) comment that Australian history 'does not read like history, but like the most beautiful lies … but they are all true, they all happened.'[11] Mark Twain was an early visitor to Victoria's Longerenong Agricultural College where he praised the city students attracted to the rural life 'without any inherited prejudices in favour of hoary ignorances made sacred by long descent'.[12] The city-rural divide was to be a continuing feature of agricultural education throughout its association with the University – as were 'hoary ignorances'. In its early iteration when the University was debating entry to the sector Samuel Wallace, the Victorian Director of Agriculture, in the September edition of the 1904 *Journal of Agriculture* claimed that 'farmers' sons would never attend in any great number and I am afraid that those who did would not return to the plough.'

Prior to that uninfluential viewpoint, a college as distinct from a university approach was discussed by A. R. Wallis, Victoria's newly-appointed Secretary for Agriculture. He wrote in 1874 that 'it is by no means essential that an agricultural college should stand alone and have no other course of instruction connected with it; on the contrary there are many branches of useful technical learning which might be taught under the same roof'.[13] This prescient comment was never able to be realized while agricultural colleges were under the auspices of the State Department of Agriculture – not even when they were liberated as the autonomous entity, the Victorian College of Agriculture and Horticulture (VCAH) in 1983. It might have become possible after the 1997 merger into the Faculty at the University of Melbourne, but this opportunity was missed.

That merger was the completion of an historical process that began with mostly good intentions. But when it finally occurred, it followed Cornford's maxim that university decision-making only accepts change when the reason for change has long passed.[14] When merger finally occurred, it provided an opportunity for the Faculty to reorient itself to the major agricultural industries of the future in Australia's most productive and intensive agricultural region. This should have happened decades earlier. While it led to a rationalization of most agricultural education in the State, the University was already into its post-agricultural era and in any case had sought the merger for other reasons that emerge in this book. At the time of writing, a further merger – that of two faculties to form the current Faculty of Veterinary and Agricultural Sciences – is being bedded-down. This development indicates a greater appreciation of the commonalities of science while carrying the risk that agricultural and veterinary science might be misunderstood as being limited to the technological sciences.

The Faculty has thus been faced with change through much of its existence, and the process of change continues. So far as this conforms to the changes of overall university education to absorb the knowledge it creates and garners, the Faculty will continue to be valued. From an agricultural perspective, universities are a creation of the current millennium compared to the 12,000 years of accumulated agricultural knowledge, which allowed the stratification of societies that ultimately produced the great traditions of learning. Agricultural science draws from both histories – that which produced the food surpluses that allowed cities and universities to arise as well as the interdisciplinary codification of knowledge that universities developed. Among its major social responsibilities, the University of

Melbourne has inherited a noble lineage as custodian of the nation's major agricultural science education base. This significant responsibility is best understood through the realization that sustainable food production is the primary issue facing humankind, and relies on the constant production of graduates in agricultural science.

Chapter 2

The Lineage of Agricultural Education to 1886

The University of Melbourne followed a proud tradition in agricultural education when it established its Faculty of Agriculture in 1905. In a young developing nation, it would have been easy to leave the role to the practical farmer-training colleges common to many nations, especially as they had already been created under government auspices in Victoria and some other States. In promulgating the understanding that science underpins practical technologies and that management of biological and human environments is a complex process involving myriad interactions, the University was forging a path that would place it at the international forefront of agricultural science at different periods across its 111-year history to date. The foundations on which the University's created its Faculty had been laid down elsewhere by various insightful universities and research sites across Europe and the USA.

Universities have defined much of modern civilization at least for 700 years[15] as repositories of knowledge and scholarship while allowing peripatetic scholars to interact uninhibited by the limitations of language, religion, politics or culture up until the modern period. Agricultural education was for most of that period an unspecified aspect of natural philosophy, which was both interdisciplinary and non-technical in a modern sense. This critical approach to agricultural science continued in parallel with the

formalization of practical agricultural colleges in the 1600s.[16] An early English proposal 'for the erecting of a Colledge of Husbandry and in order thereto for the taking in of Pupills or Apprentices and alfo Friends or Fellowes of the same Colledge or Society' apparently predated similar European developments such as the Academio Dei George in Florence at 1753, which offered agricultural training,[17] and the establishment of a Chair in Agriculture at the University of Padua in 1764.[18] Other early forms agricultural education included an Agricultural High School founded in 1818 that was the forebear of Germany's University of Hohenheim, a French National School of Agriculture at Gignon founded in 1827[19] and an Italian school of agriculture established by the Marquis Ridolfi in the 1830s to serve the sons of farmers without the requirement for fees. Similar developments occurred elsewhere, such as in Hungary and Prussia.[20]

At universities, the Foundation Chair in Agriculture at Padua was followed by a Chair at the University of Edinburgh in 1790 to which Andrew Coventry was appointed.[21] The Scottish universities were more attentive to practical knowledge than Oxford and Cambridge, a continuing example being Adam Smith's *Wealth of Nations* published during the Scottish Enlightenment and the Scottish Agricultural Revolution in 1776.[22] Coventry is hailed as the founder of the Scottish system of agricultural education that influenced the design of the Land Grant Colleges of the USA – and in part, the initial phase of Victoria's agricultural colleges.

The agricultural revolution that had inspired new animal and crop sciences across Europe and the UK must have also influenced universities through knowledge of such chemical fertilizer trials as Boussingault's in Alsace from 1830[23] and

the establishment of formal experimental stations such as Rothamsted in 1843.[24] Cirencester, established in 1845 in England and now known as the Royal Agricultural College, was the first dedicated agricultural college in the English-speaking world. Linking teaching and extension to such research institutes as the Rowett began in 1912[25] and continued into recent times.[26] The US Land Grant Colleges developed extension as an educational outreach for those unable to attend colleges and linked them more closely to research through their common State funding,[27] supplemented by earnings from the Federal land grants. Elsewhere, notably in Europe and England, such integration was ad hoc. Australia largely followed the model of the English colleges of agriculture, beginning in South Australia (1885) and Victoria (1886). The objective was to train young people for farming,[28] and in the Victorian case was to be funded through a modification of the US Land Grant system. Integrated scientific understanding was limited in such a milieu and linkages to embryonic universities were pragmatic; Roseworthy Agricultural College diplomats were able to gain credits in the University of Adelaide's BSc degree from 1905, although few took that path until the foundation of the Waite Institute in 1924.[29] The University of Melbourne showed leadership in creating the first Faculty of Agriculture, which was uncomfortably linked to the colleges mainly to gain short-term access to practical farm experience.

The Victorian agricultural colleges had been allocated land grants somewhat similar to the US Land Grant Colleges, but a combination of looking to England and the economic depression of the 1890s forestalled the model's success. Soon after, the University's creation of the Faculty introduced status-linked competition that persisted

throughout the lifetime of the colleges. Two outcomes from the separation of agricultural science in universities from practical teaching in colleges have been a long-term confusion over what constitutes an employable graduate[30] and a low level of farmer education in Australia.[31] In the 1860s, less than two per cent of some 7,000 annually entering farming across Australia had formal post-secondary education – the lowest among developed countries.[32] The relativity had hardly changed a century later. In some ways this may be seen as a culture that became entrenched in Australian farming along with a tendency to view farming as synonymous with agriculture to the exclusion of processing, marketing and environmental management.

The Royal Agricultural College, Cirencester – 1860[33]

The form of agricultural training in Australia may also be related to the country's path of development. By 1850 there was a significant agricultural sector and the economy was based on wool, for which export prices were sufficient to cover the difficult transportation conditions before the

arrival of railways. Other agricultural products mostly served local urban demand in an economy enjoying a standard of living higher than any other country. The discovery of gold in 1851, initially took labour away from farming until wealth created strong demand for prime food products. Pastoral leases were subdivided to accommodate farming, particularly on the better soils with reasonable rainfall that were well represented in Victoria. A vision of a yeoman democracy arose based on the 'belief that man by the process of civilising the wilderness as a small farmer could through his own efforts (and with a little help from the state) reach that state of bliss which would enhance not only the future of his family, but also the prosperity of the state.'[34] Accomplished through the Land Acts of 1862 (Duffy Act), 1865 (Grant Act) and 1869 (Second Grant Act), fences and homesteads sprang up to co-exist with the 'squattocracy' now connected to ports by railway. Agricultural training in Victoria began at this time, largely to service the new farmers and as a consequence was oriented to technical skills.

Global developments from about 1870, including rising international trade and a consequent recognition of the need for cost-efficient production, brought technical skills into view as an element of national capital contributing to agricultural exports. The goal of technical improvement had stimulated the progenitors of the Royal Agricultural Society to solicit small government grants to improve farm practice by staging agricultural shows from the 1840s,[35] while a Board of Agriculture operated an Experimental Farm at Royal Park from 1858 to 1869. Its director, Thomas Skilling, suggested that it become a 'training Establishment [for] imparting agricultural [and] literary education to persons desirous of following farming pursuits in this

colony.' Nothing came of this although the land was ultimately reserved for agricultural experiments.[36]

Experiment farms, schools, colleges and universities may appear to have been an ideal continuum, and perhaps could have been if agricultural education had been approached seriously and uniformly across Australia. But Colonies differed in their approaches, and the fabric woven of training and education was never reinforced institutionally and frayed with time. Rather than a fully functional system from appropriate school-level teaching about agriculture within the sciences as a continuum, the few agricultural high schools established in the 19th century, particularly in New South Wales, South Australia and Western Australia, morphed to elite government schools more than to sources of agricultural students for universities and colleges. The tradition continues in such schools as Urrbrae in SA and Hurlstone in NSW.

Victoria with its strong private sector origins, gold wealth and potential for more intensive agriculture initially sought to increase rural populations without preparatory education and as might be expected, failures resulted. Perfunctory implementation of agricultural schools in Victoria soon faded to a subject of 'agriculture' in Year 10 in rural high schools, while serious students focused on other courses aimed at university entrance. Victoria's general failure to create agricultural high schools, notwithstanding a few longer-term successes such as Ballarat Agricultural High School, was probably exacerbated by the establishment of agricultural colleges that overlapped with high schools. But failure has also been traced to resistance to education in favour of experience by farmers who have been described as 'a class sceptical of men who are classed as experts'.[37] As a

considered review of agricultural education has recently noted, 'this view is reflective of a significant proportion of farmers and pastoralists through much of 20th century in Australia',[38] although it must be noted, for example, that some wool growers made great strides in breeding and technological developments. The creation of agricultural colleges in NSW, Queensland, SA and Victoria decades before agricultural science education began in universities was to establish a lasting emphasis on practical skills. This situation was to remain, even as it became more obviously counterproductive, for a century. The history in Victoria where agricultural training and education were both more critical to economic advancement provides Australia's clearest example of success amidst missed opportunities.

Agricultural training in Victoria may be traced to the effective 1870s lobbying of India-born Alexander Wallis, a graduate of the Royal Agricultural College at Cirencester and Stuttgart Polytechnic who was to become the foundation Secretary of the Victorian Department of Agriculture established in 1872, a year after he migrated. Initially a journalist for *The Australasian*, Wallis had already reputedly declined the Foundation Chair of Agriculture at Cornell University.[39] Lobbying was also used to advance their careers by the two Dow brothers who were agricultural journalists for *The Age* and *The Argus* newspapers. *The Argus* was owned by pastoral interests while *The Age* was the driving force for selection and closer settlement,[40] which was joined by powerful mercantile and political groups to successfully support farming above grazing. Wallis, writing as 'Ackermann', in *The Australasian* called for agricultural training in the same year of 1871 that a Royal Commission on Foreign Industries and Forests recommended agricultural subjects in elementary schools, but not did not

recommend colleges. The 23 year-old Wallis rode the politics and encouraged amalgamation of the existing Agricultural and Pastoral Societies and restricting government prize monies to 'legitimate agricultural exhibits' rather than 'sporting dogs, lap-dogs, rabbits, ferrets, cats, guinea pigs, hunters, fancy needle-work, Berlin wool-work and suchlike'.[41] He then commandeered the abandoned Board of Agriculture library, collected new data on meteorology, entomology, soil types, fencing, vine-growing, farming practices, and acclimatization, and published his annual report to the Minister as a book. In 1874, the book exceeded 300 pages replete with reports on the forests and 20 scientific papers, many by Wallis himself. Books were lodged with all Mechanics Institutes, Public Libraries, Pastoral Societies and with prominent farmers and land holders across Victoria and beyond.

Wallis also kept up a voluminous correspondence with overseas colleagues, exchanged and distributed seeds, judged at shows, mounted exhibitions in his office, conducted lectures, and advised his Minister. However, his expectation to rise with the importance of agriculture was thwarted when Agriculture was made subordinate to Lands and his comprehensive annual report was scrapped. Nevertheless, his writing was to have its effect when the Minister sought his advice about a 'central college of agriculture' after having reserved the sites selected by Wallis for model farms. Wallis advised that the established farmer was the first need for training before any consideration of the creation of a 'central College, having its full complement of professors, its experimental grounds, its laboratories, its veterinary hospital and other indispensable appurtenances'. Crop rotations and fertilizer trials at Dookie, Trentham, Macedon and in the Wimmera and Gippsland were

suggested to meet the immediate needs of agricultural education. But intent on creating a training facility, the Minister chose the site of Dookie in central Victoria.[42]

Established in 1879, Dookie farm selected 15 students from 46 applicants for training in 'the practical branches of agriculture'. However, its location on the fringe of poor agricultural settlements on 'second class land'[43] and distant from Melbourne, was a far cry from what the self-important agricultural establishment had in mind for its sons. Created to service government and farms, agricultural colleges were more a product of politics than demand from the squattocracy, which preferred to educate its children in private schools, a phenomenon to later be capitalized on in the 1960s, for those sons not dispatched to Cambridge or Oxford, with the establishment of a private agricultural college that continues to appeal – Marcus Oldham. Wealthy landowners of the 1880s preferred Trentham or Macedon as sites for colleges and so belittled the Dookie site. Successive ministers sought popularity with the landed gentry and Wallis was marginalized and ultimately forced out in 1884.[44] Dookie deteriorated across its five years as a training farm for boys mixed with an orphanage and reformatory that trained wards of the state for farm and domestic service. The Minister entertained ideas of selling the farm to parties purportedly interested in setting up a private agricultural college.

The re-emergence of agricultural education occurred with the Dow brothers' enthusiasm about Land Grant Colleges after their visit to the USA. This spurred an 1884 Agricultural Colleges Bill modelled on the US Morrill Act that granted lands to be leased out as a means of funding agricultural colleges. In introducing the Bill, the Minister for Agriculture,

the Hon. F.T. Derham, noted that agriculture was now 'universally admitted to be a science' in an era when the farm product value in Victoria was twice that of the wool clip.

The Victorian Agricultural Colleges Act 1884 reserved 150,000 acres as an endowment for agricultural colleges and experimental farms governed by a Council of Agricultural Education comprising eleven members. Initially the Council favoured the idea of one central college with associated farm schools in various parts of Victoria, proposing the old Model Farm at Royal Park for the central unit. Pressure then came from interests all over the Colony, each anxious to have the college in its area. The Shepparton Agricultural Society wanted Dookie reopened to fee-paying students, the Stawell Shire Council invited inspection of a site near the town and the Trentham Farmers' Union advocated Bullarto. Council responded by re-opening Dookie. The Council considered admitting young women for certain skills training, but failed to gain support beyond intermittent short courses at Dookie. The Council also created a second college at Longerenong at the time the economy began to sour.

An 1889 Royal Commission into Technical Education, chaired by the land-boomer Theodore Fink, looked beyond the economic depression and toward Federation and acknowledged that sound education was a hallmark of national economic success. The Commission saw agricultural training as a primary need through specialist colleges and agricultural subjects in schools. By this time Longerenong had accrued debts as its endowment lands underperformed, and the College closed.

Horticultural and forestry education was to come later with the former emerging slowly from the Horticultural Society's

gardens in Burnley playing a key role in the acclimatization approach that was still in vogue during the closing decades of the 1800s. By the turn of the century some training was taking place and the Department of Agriculture assumed the site in 1891 as an experimental farm and a School of Horticulture. Forestry was also within Wallis' mandate and led to the establishment of a Central Forest Board to operate from the Department of Agriculture and regional bodies and brought 'a semblance of order to the disorganised forest system of Victoria'.[45] Legislation strengthened conservation in 1876, but Wallis' power was waning and the sector was to struggle until 1919 when a separate Forests Commission was formed and forestry training could be considered.

The shaky origins of agricultural education and training may be traced to Wallis' vision being forestalled by the economic depression of the 1890s. As such, Alexander Wallis may well be considered the father of Victorian agricultural education; various others might also be considered among the founding fathers. Such persons are mentioned in an earlier Faculty history[46] but few had Wallis' vision and his understanding of the difference between agricultural education and training. Nevertheless, even Wallis made little connection between agriculture and the University, which had been established two decades before his arrival in the Colony and had yet to create its Faculty of Agriculture.

Chapter 3

Prelude to a Faculty of Agriculture – 1886-1905

Alexander Wallis' farsighted views reflected his times. Moves to arrest declining rural prosperity in the UK were being reinforced by technological developments in agriculture, which had spawned new agricultural colleges. The USA had followed this logic and funded their agricultural colleges through a land grant in each State from which they could support their costs. Victoria adopt the form of the US model, supposedly modified to suit local conditions, and established Dookie (1886) and Longerenong (1889). Burnley (1891), the third training site that commenced before the University created its Faculty of Agriculture, was not allocated lands to finance its programs. Within the decade, rental income from rural lands fell substantially with the 1890's depression; colleges were to never return to the land grant funding model and thereafter remained reliant on government grants and political largesse. That the agricultural colleges were established later than the University (1853) itself might be taken as an indication of the wealth accumulating in Melbourne more than in the countryside – a trend established in this gold rush period. Created from the outset as the equivalent of a division within a Victorian Government department, agricultural colleges were constrained within public service regulations while the legislation creating the University granted autonomy.

Development of the University[47]

“The preamble to the University Act, 16 Victoria, Act No. 34 declared "...it is expedient to promote sound learning in the Colony of Victoria and with that intent to establish incorporate and endow an University at Melbourne open to all classes and denominations of Her Majesty’s subjects...". The University was endowed with an annual grant from the Treasury. The administration of any religious test in connection with the obtaining of any "advantage or privilege" of the University was expressly debarred. The University's degree granting powers were subsequently extended to encompass all disciplines, except divinity. On 14 March 1859 Queen Victoria granted Letters Patent that the University's degrees in the fields of Arts, Medicine, Law and Music "shall be recognised as Academic distinctions and rewards of Merit and be entitled to rank precedence and consideration in Our United Kingdom and in Our Colonies and possessions and throughout the world as fully as if the said degrees had been granted by any University of Our said United Kingdom".

In 1881 The University of Melbourne was the first university in Australia and one of the first in the world to admit women. The first woman to graduate from the University did so in December 1883. Subsequently the University and its colleges [such as Trinity, Ormond, Newman etc] were enriched by the gifts of civic-minded Victorians, and it forged enduring links with the city's growing cultural and professional institutions. The first anatomy lessons in the southern hemisphere were one of many significant contributions it made to education in the broader region. In the post Second World War period, it became a much larger institution drawing not only more broadly from across the Victorian population but from across Australia and with a significant proportion of international students. The University granted the first Australian Doctorates of Philosophy in 1948. And to put it in a modern-day context of university administration, the first full-time Vice-Chancellor of the University, Raymond Priestley, was appointed in 1935.

Established by the University Act (Vic.) 1853, the University of Melbourne was defined by the new Colony of Victoria that had come into being in 1852. Its inaugural chancellor Redmond Barry exerted great influence over many of Melbourne's institutions including the University across three decades. Its first four chairs – Classics; Mathematics; Natural Science; Literature, History, Political Economy and Logic[48] – were filled from Ireland and England 'with the greatest influence from Queens University, Ireland'[49] after their education at Trinity College and Cambridge. Instruction commenced with 16 students in 1855 in the building subsequently occupied by the Mint in William Street until the Quadrangle opened later that year and by 1857 housed lecture theatres, a laboratory, the national museum and the four professors and their servants.

Compared to earlier visionary periods, the 1880s might be seen as a somewhat backward period in education and this was reflected in the nature and governance of the agricultural colleges created through this period. The same might also be said of the University although the national changes that were to occur around the turn of the century involved key University figures and provided a potential fillip to the institution. That fillip was needed, as Clements notes. 'The nineteenth century had left each of the four most populous states with a mixed collection of public and private elementary schools, a host of corporate and private schools unregulated by any machinery other than a public and matriculation examination system, a scattered and varied bundle of technical schools and colleges stretched uneasily across the boundary between post-primary and higher education, a handful of professional training institutes, and a university which, if comparisons be allowed, had more of the appearance of a colonial college than a public university,

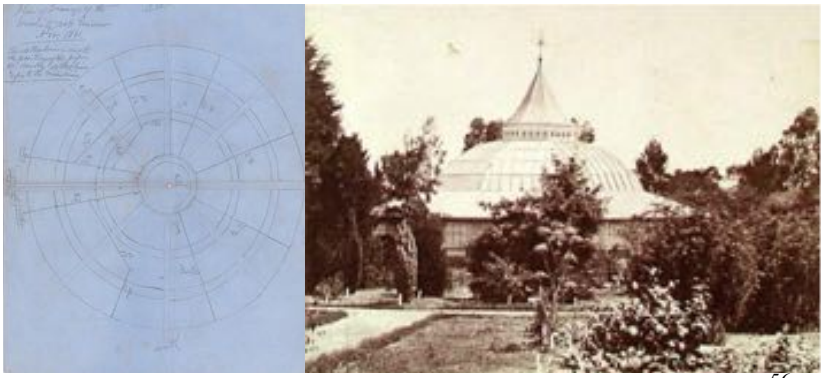
and carried on a tenuous existence as a ward of parliament.'[50] In one way a tribute to the entrepreneurial spirit that created Melbourne and Victoria and a staid interpretation of colonial governance responsibility, the mix was ripe for coordination – especially in agricultural education since agriculture was the continuing backbone of the Colony.

A century later, a Vice Chancellor summarized the 'origins of the University, similar to the University of Sydney, [as lying] in a colonial Act … modelled on the Scottish and Irish universities' with influences from the Prussian University of Göttingen's invention of academic freedom. Some aspects are said to have been informed by Newman's *Idea of a University*, but the later addition of research was an influence from leading US universities that had been followed in turn by Cambridge and Oxford.[51] By the mid 1870s, this model was appreciated by some in Melbourne, but was to stumble in the face of political ideals of economic expansion confounded by deep economic depression. The Faculty of Agriculture was founded after this disruptive period.

Agriculture had been proposed as one of the initial courses for the new University before 1853,[52] but was not to be formally established until 1905. Nevertheless, aspects of agricultural science were evident from its earliest days, such as in the creation of the System Garden with its concentric taxonomic plantings when it was initiated in 1856 around a central conservatory echoing that of Cambridge. It would take 20 years to be completed. With most developments influenced by Barry, the establishment of the Faculty of Law in 1857 is as unsurprising as is its part-time lecturers being drawn from local practising lawyers.[53] A Faculty of

Engineering followed in 1861and Medicine in 1862 replete with a lecturer in medical botany.

The University created chairs in pure and applied sciences to represent 'a more practical and scientific approach'.[54] By the 1880s, a form of University life had developed and the first student society was formed, leading to the University Union in the style of the Oxford Union, and the iconic Wilson Hall was opened – Sir Samuel Wilson, probably the largest sheep owner in the world and Legislative Assembly Member for the Wimmera, funded the hall's construction.[55] In the same year – 1886 – that the first of the agricultural colleges were established by government as extensions of schools, the University created a Bachelor of Science and a Doctor of Science and established a Chair in Natural Philosophy. With more than 500 students by 1901, the University entered into an agreement with the State Department of Education to offer a diploma for new school teachers, and in 1905 was to open the Schools of Agriculture and Dentistry. The decade would end with more than 1,000 students enrolled in the University.



McCoy's 1850s Sketch of his Botanical System Garden[56], and fructification by c.1870[57]

Hints of agriculture existed within the University, such as the System Garden, a lecturer in medical botany and the Chair in Natural Philosophy, but were uncoordinated. The rising awareness of applied science within universities had inevitably led to consideration of agricultural science, as it did elsewhere in the Anglophone world. It had parallels with engineering in its applied nature yet suffered from the fact that it did not train a recognized profession, which led to it being seen as associated with uneducated farmers. It therefore inspired a practical focus, which conservative views saw as being best catered for within colleges that emphasized manual skills above scientific understanding. This 19th-century dichotomy was to plague agricultural education into the 21st century.

Agriculture was taken seriously by the University in the first decade of the 20th century when funding was made available. The existence of agricultural colleges may have contributed to this relatively slow start, but it may also indicate a social distinction between those entering colleges and farming and those entering the University. The University's foray into agriculture might be traced to the success of the two innovations that had inspired Wallis; the application of science to agriculture in the UK to stem a decline in rural prosperity, and the success of the land grant colleges in the USA. Enamoured of the US model that overlapped with universities, the agricultural colleges contributed to the slow start-up of University's agricultural offerings.[58] But the Victorian agricultural colleges were not as independent as the US Land Grant Colleges for they remained mendicants of the State in a context of renewed emphasis on closer settlement.

One history of education in Victoria[59] records the creation of the Council of Agricultural Education in 1885 followed by the opening of Dookie in 1886. Demand produced a student waiting list of more than 50 by 1889, which spurred the opening of Longerenong in that year only to close a decade later in response to the seven difficult depression and then drought years. A 1900 Royal Commission observed, perhaps unfairly, that Longerenong had been a costly failure that was doomed from the start as a result of its poor location and that entry requirements for both colleges were inadequate, reprimanding the Council for failing to meet the needs of agriculture, which then represented 25 percent of the workforce. Parliament was intimately engaged in the issue, and in 1903 Dr Thomas Cherry, who since 1900 had been the lecturer in bacteriology with a personal interest in farming problems,[60] was despatched to the UK and Europe to investigate technical and in particular agricultural education – his subsequent report made no mention of a university course. Yet, 'in August 1904 Dr J. W. Barrett moved in the council of the University of Melbourne that the university should confer with the Council of Agricultural Education regarding the establishment of a degree or diploma of agriculture at the university.'[61] Largely ignoring the Council of Agricultural Education and the damning reports about low demand and uncontained costs, the Faculty of Agriculture was born, primarily because the Premier of the time saw political benefit in its creation.

Such developments had been of increasingly of concern to the colleges' Council of Agricultural Education, especially when Cherry advocated an elite qualification: 'The man who has at present a University diploma or degree is in a totally different position, as far as his standing with the outside public is concerned, from the man who has a diploma from

any outside body. No matter what branch of science it may be, you will always find a certain number who will aim at getting a University degree or diploma, simply because that would certainly be selected when applicants are called for a position, as being the most important evidence in favour of a man's training and ability.'[62] The aim was 'to turn out philosophers and get them to go into the reason of things',[63] so they could raise the quality of government employees and agricultural college staff, and thus farming.

Lest such detail be brushed aside as trivia in our current age of marginalising agriculture, the reader is reminded that agriculture at this time was central to the vision of nation building. Agriculture was the engine of fulfilling the dreams inspired by Mitchell's early vision of Australian Felix.[64] Parliament sought agricultural development through accelerated closer settlement that in turn would require an increased supply of better educated farmers who would demonstrate the profitability and superiority of agricultural over city life. From such a political imperative, State-linked agricultural education began its long association with lobby-based funding. After his report on agricultural education in Europe, Cherry accepted a post in the State Department of Agriculture and in 1904 assumed the Directorship after Samuel Wallace retired and when his personal friend, the Minister of Agriculture George Swinburne, offered him the post. Cherry became Director of Agriculture at a time when his discipline at the University was in internal conflict, which encouraged him in his quest to address problems of farming, an interest he had developed in his Gisborne childhood. As Director, he 'travelled and lectured extensively, and published thirty-four papers on such diverse subjects as silo-construction, bee-keeping and pasture improvement as well as further works on scientific dairy production and water

purification'. Controversy in 1910 would lead to him moving back, with 'the strong recommendations of cabinet', to the University as the newly created Chair of Agriculture in 1911.[65] His legacy in spanning agriculture and health, which also brought him to the University's Veterinary Research Institute, might be seen in La Trobe University's home for its School of Agriculture some fifty years later being eponymously named for his son[66] – and as foreshadowing the constitution of the Melbourne's Faculty of Veterinary and Agricultural Sciences of one century later.

Before and through his tenure as State Director of Agriculture, Cherry was the leading advocate of two courses at the University – a four-year degree based on three years at the University and a final practical year at Dookie and the Fitzroy Veterinary College, and a diploma based on two years at the University followed by the practical year. The more practical Wallace, in his final year as Director of Agriculture, had been kinder to the agricultural colleges in his statements to the Commission and favoured two years at the University and two in practical training, creation of a Faculty of Agriculture and some flexibility in entry requirements.[67] The Commission did not recommend that the University create a course or faculty and cautioned it against any decision that would incur costs, noting the failures of Longerenong, the Rutherglen Viticultural College and the only 'qualified success' of Dookie. Yet, as noted above, the University went ahead within a year.

Barrett's proposal in the University Council was supported by fellow member, the State Director of Education, Frank Tate, who was to be influential in other aspects of agricultural education, as a means of improving general education in Victoria. He proposed something akin to an

agricultural high school to equip boys to enter Dookie and the University, which may have been an astute ploy to gain political support for a Continuation School that could incidentally enhance teacher training. The politics came to a head in a Conference between the Council of Agricultural Education and the University in 1904 at which the former group refused to agree with a generally worded University proposal. Clements feels that Tate, knowing that the Premier required finality, was well prepared and was one of the authors of a report published by *The Age* shortly afterwards[68] that skilfully mentioned scholarships for students to continue in special schools so they could become teachers and agricultural college and University students.[69] Tate's interest in agricultural education led him to sow the seed for his teacher training in the politically more fertile fields of improved agricultural and mining education. It also led him to propose agricultural high schools that were 'not designed to turn out farmers, but to provide an education as will enable a boy ultimately to become an educated, intelligent practical farmer. A farmer can, through his District Agricultural High School, give his boy an advanced education that does not wean him away from his father's interests and pursuits.'[70]

Relations between the University and the Council of Agricultural Education became ever more strained during 1904, ostensibly over whether theory should precede practical training – but the documents suggest that class prejudice was also at play. When the Council countered the three-plus-one degree by suggesting the three years be spent at Dookie and the final one at the University, three University representatives including Tate inspected Dookie facilities and unsurprisingly declared them inadequate for University education. Increasingly left out of play, the

Council finally agreed with the University proposals, which included inviting a minority of Council members to serve on the University Faculty committee. Students entering the agriculture degree were required to have passed matriculation in English, French or German, arithmetic and drawing, while those entering the diploma were not required to have matriculated – a major departure from University policy resulting from, at the time unknown, political pressure. That political pressure determined so much in these early years was due to more than the primacy of the agricultural sector – the University was still embarrassingly short of funds after the 'Dickson frauds' discovered in 1901.[71] Government support came with requirements for advanced agricultural and mining education, which the Premier, Tommy Bent, linked to widening entrance to intelligent working-class boys. Funds provided for facilities including laboratories for agriculture and mining were tied to the University being 'prepared to co-operate with the agricultural colleges' and to accept without fees 20 students into Agriculture and Mining and 20 teachers into Arts. Tate's influence continued a few years later with the creation of Exhibition scholarships for the four-year degrees in agriculture and mining. Further detail on the University motivations and machinations is contained in Selleck's comprehensive history.[72]

On 1 August 1904 the University Council formally sought cooperation with the Council of Agricultural Education, which only became amenable after the Premier contrived an incentive for their cooperation. By 4 May 1905 drafting of regulations for a University degree and diploma course had been initiated. The primary course, the Bachelor of Agricultural Science, was to use the basic sciences as its foundation before introducing more applied sciences in the

final, fourth year. It was to be general in nature and include a practical component through a residential period at Dookie College. In addition, further practical experience was to be gained by students through farm work during vacation periods and through a post-fourth year period of four months of additional approved field work. The emphasis clearly was on land use and agricultural commodity production.

Chapter 4

The Faculty's First Deans – 1905-26: Osborne, Cherry, Ewart, Laby & Richardson

Forced to engage with the University by the State Government, the State Department of Agriculture's Council of Agricultural Education's argument for a three-year practical course at Dookie against the University's opposite stance was doomed. Although the Fink Commission had been reticent to recommend a University faculty after 'the costly failures of Longerenong and the Viticultural school at Rutherglen',[73] Spring Street politics and deft argument on the need for science that could not be offered by the colleges ensured that the University won the day. The University magnanimously agreed to invite the Dookie Principal and one Councillor to sit on the new Faculty Committee. To understand this distant relationship, it is first useful to review the fate of the agricultural colleges through the period leading up to the Faculty's constitution in 1905.

The rural colleges had struggled with their allocations of unselected lands released under the Land Acts of the 1860s and variable funding resulting from political whim. Lands seen as overpriced by selectors forming the irregular tract from Mount Major to the Broken River initially became an experimental site known as Dookie. John Thomson the first farm manager, lived as did many pioneer farmers in a tent and bark-hut for his first nine months in 1886 clearing trees and scrub in preparation for a vineyard and olive grove.

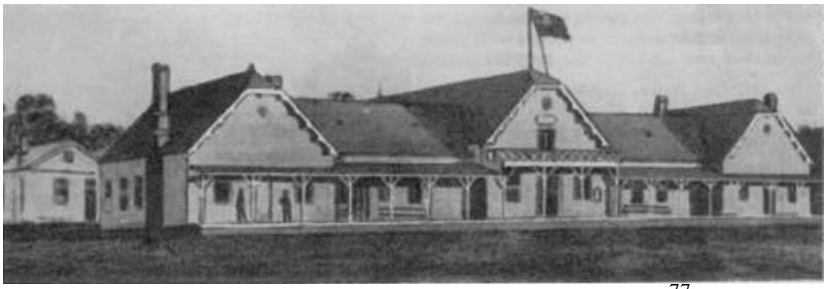
Basic buildings soon appeared and then students; the Council of Agricultural Education having decided that as '14 was the earliest age at which a lad should be put to labour' set that as the minimum entrance age.[74] The first 40 students soon arrived as did the first Principal, Robert Pudney who was to serve for a couple of years before moving to assist with the creation of the second college at Longerenong of which he also became the first Principal.

Longerenong's site of unselected land in the Wimmera was judged suitable for a college because it was remote from a large town. Opening in 1889, Pudney soon handed over to William Brown for a year before he moved to Dookie and the Council agreed to one its members, Thomas Dow, assuming the role of Principal from 1891. Though he was declared insolvent in 1892, he was able to convince Council to let him stay on through the drought until 1897. His tenure at Longerenong saw the testing of the McKay combine harvester prototype and Mark Twain's visit. Twain (Clements) wrote: 'There were forty pupils there – a few of them farmers, relearning their trade, the rest young men mainly from the cities – novices. It seemed a strange thing that an agricultural college should have an attraction for city youths, but such is the fact. They are good stuff, too; they are above the agricultural average in intelligence, and they come without any inherited prejudices in favour of hoary ignorances made sacred by long descent.'[75] Then Marco Guerin became Longerenong Principal for less than a year until the college was closed in 1898 and narrowly avoided being subdivided. The Fink Commission deemed Longerenong a failure in its 1900 report.

Meanwhile, Dookie avoided Longerenong's fate as a result of political favour but did not flourish. Pudney's pliable nature

was the type that suited the political negotiations essential for the viability of the colleges in their government milieu. His start-up at Dookie was succeeded by Thompson who oversaw the farm school's development into Dookie Agricultural College with substantial buildings in a period when agriculture was prestigious. Prominent citizens and parliamentarians spoke of their intention to send their sons to the college, although the wealthier pastoralists looked further afield. Then the 1890s crash dried up enrolments, rents from endowment lands and government support. Council of Agricultural Education members were found to be have been financially negligent, and a new Principal, William Brown, was told to make the smaller area of farm around the college underwrite education costs. In hindsight, the University may have been prescient in not opening its agricultural Faculty through this depressive period.

Depression was made worse by drought, which in 1894 brought the dismissal of the Principals of Dookie and Longerenong, and the appointment of Hugh Pye as Dookie Principal, a post he retained for the next 22 years. A collaborator with Farrer, Pye continued his practical cereal breeding for another 21 years developing drought-resistant high-gluten wheats that were soon planted across most of northern Victoria and southern New South Wales.[76] Dookie's tribulation eased when it received students from Longerenong's 1898 closure but educational standards were questioned by the 1899 Fink Commission, which found that of 376 students that had passed through Dookie, only 98 had gained the diploma. Over the same period, the Department of Agriculture had also developed another agricultural school in the Melbourne suburb of Burnley.



Dookie Agricultural College, after 1886[77]

The School of Horticulture arose in 1890 when the Department of Agriculture took control of the bankrupt Horticultural Society of Victoria's Burnley Gardens site that had been established in 1863. Gardens' curator George Neilson initially catered for 97 students until 1897 when the first Principal was appointed, the charismatic Charles Luffmann. His 'uncommon gift of a speaking voice which would charm a bird off a bough'[78] made him popular and his integrity was widely celebrated, being attested to in a prose poem published in *The Argus*.[79] Burnley was more than just a horticulture school and Lufmann more than a normal principal – he taught at the Working Men's College (later RMIT), and oversaw Burnley's livestock management, milking, diverse orchards and vegetable gardens and the delightful Burnley Gardens. His 'sagacious and consistent policy' to spread 'the beams of horticultural improving to the remotest districts of Victoria'[80] was hard for his successor, John Cronin, to maintain and this new Principal focused his two years on enhanced pruning and hybridization techniques. E.E. Pescott became Principal in 1909 and revived Luffman's plan while extending the curriculum to agriculture in response to the Fink Commission's review.

Burnley was at this time an agricultural school in a developing city, but its primary association with the University was through Botany, and the rural colleges were closer to the minds of those formulating a Faculty of Agriculture. After Federation and economic recovery, demand for agricultural training resumed and Longerenong was reopened a few months after the University's Faculty of Agriculture was established in 1905. There was no significant Faculty interaction with the remote college and its run-down buildings. Swinburne, the Minister, proposed some scientific facilities at Dookie for the University students and the first four arrived in 1912. However, this did not indicate any increased comfort between the University and the Council of Agricultural Education responsible for the colleges, which may be better indicated by the expulsion of Fink from the State Department's Council 'through non-attendance' when he was simultaneously a member of the University Council. The two rural colleges were more agricultural training schools than colleges as they are understood today, were poorly resourced and operated in a world remote from the University.

With the Faculty of Agriculture now created, its first meeting on 15 December 1905 elected William Osborne, the Professor of Histology and Physiology, as part-time Dean. There being no staff, lecturers came from other faculties, the State Department of Agriculture, and the Council of Agricultural Education. Notwithstanding the involvement of some individuals from that last group, the agricultural colleges themselves were not involved in the Faculty.

The Faculty's second-year teaching began in 1907 and in 1911, the first student, Mr N. J. F. Thompson, graduated, and Thomas Cherry, State Director of Agriculture was appointed

from a field of seven applicants as the first Professor.[81] A product of Gisborne, his agricultural interests had been complemented by his bacteriological learning at the University as well as at London and Cambridge; thus he became the first Australian to be appointed a Professor since 1886.[82] He had been a member of the Faculty since its formation as a lecturer in pathology and bacteriology in the University's medical school. His successor as Director of Agriculture, S. S. Cameron, also became a member of the Faculty from 1911 to 1933 and was instrumental in its early development. Some University histories erroneously list the beginning of the Faculty at Melbourne from 1911 rather than 1904-5, presumably dating it to the appointment of Cherry.[83] Although the establishment of a Chair of Agriculture had been proposed as contingent on the prior creation of a model farm and an agricultural museum, neither eventuated in any significant form. Other Chairs created in the period 1904 to 1911 included compatible disciplines to the University's growing intention to strengthen agriculture, including the Chairs of Anatomy, Botany and Veterinary Pathology.[84]

But the Faculty was not yet clearly viable, not the least because of the presence of the agricultural colleges. Despite the Exhibition scholarships that resulted from Tate's deft politics, student numbers were low in the initial years as indicated in the following Table. By 1911, the State Director of Agriculture claimed that 'the university council and the professorial board were completely out of touch with agricultural education'. He stated the course, in common with Dookie and Longerenong, was a failure. The unfavourable politics, poor integration with the colleges and poor initial performance led one educational historian to comment that 'there appears to be little doubt that the University of Melbourne moved into agricultural education

at an inappropriate time'.[85] Correct as that statement may be in isolation, the existence of the Faculty post-WW I was to be of significant benefit to the recovering nation – and the likelihood of any of the colleges growing into modern research universities was always to remain remote.

BAgrSc Student Numbers, 1906-1911[86]

Year	First	Second	Third	Fourth	Total	Exhibitions
1906	1				1	
1907	4				4	1
1908	6	2			8	4
1909	14	4	2		20	13
1910	10	10	2		22	14
1911	11	8	9		28	22

Cherry was Dean from 1912 to 1916 overseeing the four-year course with a total of 20 students – a number that may seem low today but which was high for the times. It was also higher than would occur for decades in the University of Western Australia, which had six graduates in agriculture in 1958. Cherry concentrated on research oriented to the problems of Australian agriculture that he intended to conduct on a 60 ha University farm on land of the Yarra Bend Lunacy Department, but he failed to secure the land.

The practical fourth year of the BAgrSc course was conducted at Dookie but was soon seen as isolating students from the University's educational environment in their critical final year, and thus compromising the educational intent of the integrated degree. It was at this time that the MAgrSc degree was created for honours graduates after two years of professional experience; it was not a research degree.

Cherry had followed the educational practices of his day, which advanced slowly and so the fourth year at Dookie continued – and the concept was deeply entrenched. It was to take four decades of observations across Australia before it was concluded that no practical experience in agricultural science degrees met all objectives because 'if students go to a college or farm early they are scarcely sufficiently advanced to appreciate the scientific aspects of farming, and if they go at the end of the course they are liable to be troublesome and superior in attitude at a college'.[87]

In the event, when University students complained of a manual workload of up to 58 hours per week, the Dookie Principal presumably felt that his correction of their exaggeration to 46.5 hours dealt with the matter. A cultural divide that began between the public service and the University had now become part of student cultures. Had the University students known that the name Dookie derived from the Sinhalese for 'lament' they might have pressed the matter more eloquently as might befit university students. But their point was well made in terms of status, or perhaps trade union terms, when they argued against carting firewood, delivering foodstuffs and preparing poultry for Dookie's resident staff. They may have been brave, as the academic to serve the Faculty for the longest period, Norman Tulloh, commented, to complain in an era of 'aggressive administration of the rules of the College', but they were vindicated when the Faculty agreed that 'work which is not of an educational value ... should not be extracted from the students'.[88]

When Cherry resigned in 1916 to serve as a medico in WW I, the University considered postponing BAgrSc enrolments, but in the end did not and Osborne returned to the Dean's

Chair for 1917 and 1918 to ensure that there was a Professor in the Faculty. Osborne was succeeded by Alfred Ewart (Botany) in 1919 and Thomas Laby (Physics) in 1920. Some turmoil in 1920 led to a reorganization of the Faculty that culminated in the appointment of Arnold Richardson, then State Superintendent of Agriculture and a part- time lecturer in the Faculty, as Dean.

The First Deans: William Osborne, Thomas Cherry, Alfred Ewart, Thomas Laby and Arnold Richardson

Pye was still Dookie Principal through this period but with the Faculty's creation a 'struggle between the Council for Agricultural Education and the University of Melbourne for the control of higher agricultural education emerged, continuing to 1916 when Pye resigned' and [devoted himself] to cereal-breeding.[89] By a quirk of fate, Pye's daughter had a playmate from Shepparton Agricultural High

School, whose son, Kwong Lee Dow, was to become a Dean of the Faculty nearly nine decades later, and then University Vice Chancellor.[90]

In 1917, William Gamble became the first Dookie graduate to be appointed as College Principal. Practical and with military experience, his appointment coincided with the first troops returning from the war for whom short-courses in farming were designed. Courses for women began in 1919 for domestic subjects, and were terminated after ten years, resuming only in 1951 when they included child-care training. Dunolly-born Harry Lawson[91] was now Minister and was cajoled into support for the college, which left it well equipped by the time Gamble left in 1922. It was during this period that the Faculty Committee, which included the Dookie Principal and a member of the Council of Agricultural Education, determined that University students would spend their second rather than their fourth-year at Dookie, and that the College would assess the year's performance.

Notwithstanding this common year, contact between the Faculty and Dookie remained minimal, and Dean Richardson soon transferred the residential second year from Dookie to the Werribee State Research Farm. In that same year, 1920, Parliament directed substantial funding to the University for agricultural education and guaranteed employment of graduates in the public service. In 1923 amendments to the Act provided for an annual endowment and for the construction of the building that became known as 'Old Agriculture' on the University campus' Royal Parade side.[92] Student hostel accommodation was also constructed at the State Research Farm at Werribee. Overall, buildings constructed across the decade were estimated to have cost nearly a quarter of a million pounds.[93] The location of the

Faculty's 'Old Agriculture' building on one side of the System Garden and Botany's on the other created a convenient green barrier between sometimes antagonistic personalities across integrally related disciplines[94] – especially as both Old Agriculture and Botany had their front doors on the distant sides of their buildings. While part of stock-standard government design of education buildings of the era, the solid earth-grasping presence of the Old Agriculture building itself served as a further metaphor of the fundamental role of the Faculty, just as its face to Royal Parade indicated its commonality with other applied life sciences along the Parkville Strip and interaction with the outside world.

A course in animal husbandry was agreed with the Faculty of Veterinary Science in 1921, but was not implemented, and the notions of the times are implied by the inclusion of livestock judging as the basis for animal selection.[95] The MAgrSc was also redesigned to require a dissertation. Richardson resigned as Dean in 1924 to become Director of South Australia's Waite Agricultural Research Institute, and Osborne assumed the Deanship for a third time from 1925 to 1926 while another full-time Professor of Agriculture was sought.

Longerenong, where George Sinclair was now Principal offered a two-year Certificate of Competency that articulated into the Dookie course. He was succeeded in 1912 by W.D. Wilson for some unsettled months until replaced by Albert Drevermann who came from his post as science master at Dookie. Remaining in function until 1927 Drevermann guided the college through the wartime need to meet food shortages and introduced 'farming methods, the knowledge base, curriculum, and routines of farm life, [that] changed little until the late 1950s'.[96] His leadership, high commodity

prices, full student enrolments and the Closer Settlement Act made the 1920s the golden era of Longerenong. But it had little contact with the Faculty.

When Gamble vacated the Dookie principalship in 1922, applicants for the post ranged from a Cornell PhD to a farmer from Sydney. Walter Birks, a Roseworthy College and University of Adelaide BSc(Agric) graduate, was selected. Birks proposed higher academic standards but was thwarted by the Council's implicit preference for a maximum intake. Dookie still did not have its full complement of students, but the farmers' classes were at capacity. By the end of Birks' tenure, Dookie was more successful as a farm than as a college; it out-produced local farms, sold its wheat for seed, ran 3,000 sheep, produced 310lb of butterfat annually from 40 Ayrshires and had top-of-show pigs. Retaining college fees and self-sufficient in most produce, the College was at last paying its way.

A major advance would occur in both the Faculty and Dookie with the arrival of new personalities; the innovative young Wadham from Cambridge arrived at the Faculty in 1926, and the respected Drevermann took over at Dookie in 1927. If integration of University agricultural science and college training was possible, surely this presented the opportunity.

Chapter 5

The Great Dean – 1926-56: Wadham

Sam Wadham arrived in Melbourne in 1926 while Osborne was again holding the fort and took over as Dean in 1927 – he was to serve for 30 years. The environment into which he stepped has been described as one where 'the new schools of agriculture and veterinary science which the government had founded in its utilitarian enthusiasm before the First World War were languishing by the early nineteen twenties. The veterinary school suffered from competition with the veterinary school in Sydney … it collapsed primarily because there was not enough paying employment for veterinary scientists in Victoria. When in 1927 Professor Woodruff was left with one student, the undergraduate course was closed. Woodruff became Director of Bacteriology and later the first Professor of Bacteriology (1935-44), and his School of Veterinary Science became the Veterinary Research Institute. While the Veterinary School was left with a building, a professor, and no students, the School of Agriculture was left after 1916 with a few students but no professor and no building. However, the Agricultural Education Act of 1920 supported a School of Agriculture and the government continued to allow its Superintendent of Agriculture, Dr A. E. V. Richardson, to teach classes on two days a week. When Richardson resigned in 1924, the University decided to fill the Chair of Agriculture that had become vacant for eight years'[97] by appointing Wadham.

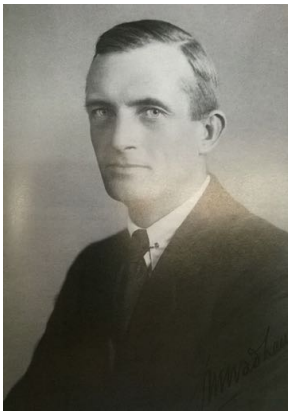
An earlier history of the Faculty suggested that Wadham's tenure warranted its own book,[98] and it was soon written.[99]

That biography expanded earlier papers, one of which introduced Wadham as arriving fresh from the reform movement at Cambridge University and quickly learning to work in an environment in which it was common to drive hard bargains,[100] and as one who 'was to become one of the most influential men in Australia's rural history, and one of the most lovable personalities in Australian academic life'.[101]

The son of an elderly railway agent, Wadham won a scholarship to Cambridge where he completed the BA and MA with first-class honours, and after the war taught botany and conducted mycological studies.[102] So, by his early 30s, he was already set for a successful career at Cambridge when he received a letter offering him the Chair in Agriculture at the University of Melbourne. This was after the University had considered 21 applicants from around the English-speaking world and found none acceptable. The University Council members George Swinburne and Sir John MacFarland, who were visiting England, asked for likely applicants, which led them to interview the restless Wadham. He was reluctant to apply unless he could assure himself that he could conduct the task well, and be accepted by the University. Part of the reluctance may have arisen from the confusion that caused friction between the University and the agricultural colleges about what constituted a practical man in agriculture; Wadham had volunteered that he 'doubted whether he could work a plough'.[103] The full Council agreed that he should be offered the role without having applied; the letter was dispatched and Wadham accepted. He arrived in September 1926 for a five-year appointment without his family, his wife being 'attached to Cambridge, her school, and her aged parents'.[104]

Ignorance of the needs of agricultural education had led

some University Council members to argue for someone more practical than a Cambridge man. This also concerned the State's Council for Agricultural Education, which as the colleges' governing body, saw itself as the custodian of such practical agricultural education. 'How wrong they were!' – it was later observed.[105] Wadham showed how practical science could be conducted, applied and communicated in a manner unforeseen by either the practical or the theoretical schools. He was also in touch across the social spectrum and would belie such country newspaper observations as the headline, 'Bad example from Melbourne University', under which it claimed 'he does not look like a professor, nor does he behave like one … He is slangy and flippant, and surely no professor should be either slangy or flippant'.[106] His charm won out. He was down to earth while commanding the respect due an albeit young and debonair Professor of the University, as indicated from the photo from around 1930.[107]



Wadham earned a respect above his peers and successors across Australia. But in his early years he was less respected by the University Council, which withheld some of the privileges extended to other professors, possibly because of

his relatively tender age. Seeking tenure after his initial appointment of five years, he met Council's refusal on the seemingly spurious grounds that funds were uncertain since the Agricultural Education Act was due for renewal. Interpreting this as a rejection, Wadham went directly to the post office and telephoned Cambridge, received an offer of an attractive position and wrote a terse note of resignation to take effect at the end of 1931. Spontaneous protests inundated the University from agricultural organisations. Prevaricating for months, the Council failed to budget sufficient funds for a tenured Chair until Wadham upped the ante by preparing for his departure and booking passage to England. Council finally succumbed and a letter to him from the Head of CSIR pleaded 'now decide to stay in this benighted country and surely generations of fat lambs will rise and call you blessed'.[108] The Faculty might never have achieved its potential if Wadham had not secured a release from his commitment to the new appointment at Cambridge.

With 31 undergraduates on his arrival on the eve of the 1930s depression, Wadham strengthened the BAgrSc by introducing economics into third year, eliminating the final honours examination and making specialisation the basis of the MAgrSc. Undergraduate specialisation was only available in minor fourth-year subjects. His integrated philosophy of agricultural education was a major influence on other undergraduate courses around Australia. Wadham saw clearly what others sometimes forgot, that agricultural science is by nature an intensive course that relies on a strong science foundation informed by the methods of agriculture within an economic and social context.[109] He saw the agricultural science student as learning more than a science student, and being 'able to think of every fresh item of knowledge from a commercial viewpoint'.[110] And he

communicated that understanding to industry as well as the University.

Playing politics well, he invoked his predecessors when making changes, as evidenced in one of his many ABC radio talks:

> The one general trend which is common to all university courses is a tendency to increased specialisation. ... In the Agricultural Faculty we have firmly set our faces against anything of this sort. Our students come to us for four years, and for 30 years they have had to take practically the same course which, I admit, covers a multitude of subjects. I believe it is right to run the course on these lines because I think that one of the chief curses of the modern scientific world is over-specialisation. ... Let me make this quite clear: The broad outlines of this course were largely drawn up by two very wise men, Dr S. S. Cameron, ... and Dr A. E. V. Richardson in 1923. All I have done is to get the Faculty to put in some economics and to touch up odd points here and there. I am far too conservative by nature to have done anything that was really new.

A supporter of research more than a researcher himself, Wadham understood the need for cooperation with the State Department. 'From [the 1920s] the State Departments of Agriculture were the main centres of applied research for the Australian grazing and farming industries.' CSIR entered the research frontier in 1926 'to carry our research in land resources, livestock, plants and the handling and processing of products' with an intention to also train researchers although that role was to remain the preserve of the universities, albeit at a low level until after the 1960s.[111] And CSIR[O]'s role in Victoria was never to include much

production agriculture due to the relatively stronger State's presence compared to elsewhere in the nation.

Wadham appointed Janet Raff to teach Entomology and Robert Blackwood (later Sir Robert Blackwood, Chancellor of Monash University) to take charge of Agricultural Engineering in 1931. Geoffrey Leeper became responsible for Agricultural Chemistry in 1934 when Gilbert Vasey replaced Blackwood, and Yvonne Aitken was appointed for Agriculture in 1945; Leeper, Vasey and Aitken remained with the Faculty until 1968, 1971 and in an honorary capacity, until 2004. Leeper acted as Dean in 1939, 1944 and 1945 while Wadham, in common with other strategic University staff,[112] served Commonwealth war demands. His influential book with economist G.L Wood, *Land Utilisation in Australia* was published in 1939, and in 1942 he also acted as Vice Chancellor of the University.

Yvonne Aitken

The agricultural colleges also had to deal with the 1930s depression, the exigencies of war and then economic recovery. Farmers had enrolled in the war in large numbers and supply of farming inputs were curtailed, which

exacerbated the problem of increasing production to meet the needs of US servicemen and UK civilians. Operating in parallel, and well informed of the Faculty's course through Wadham's greater effectiveness in rural extension, practical training institutions such as the colleges found themselves beholden to immediate government needs. Recalled with pride as a service to the nation, colleges were nevertheless diverted away from a longer-term strategy. Meanwhile, Wadham's appointment of sound scientists to his practical agricultural science course distinguished it markedly from the diplomas of the agricultural colleges from which pathways to the BAgrSc were to occasionally develop.

Under Drevermann from 1927 Dookie briefly prospered as the University recognized its science sufficiently to allow exemptions to Dookie graduates who enrolled in the BAgrSc When commodity prices halved in the 1930s, endowment land income ceased and Dookie's fledging research was terminated, Drevermann managed declining capital assets with some philanthropic assistance that leveraged State funds for a laboratory that came to fruition as times improved. In 1938 he was succeeded by Harold Pittman who left after 19 months having broken the code of not criticizing the Council in his polemic 'The Truth About Dookie College'.[113]

The impact of WW II on the colleges differed from that on the Faculty with food production demanded from the colleges while government funds dried up. On the other hand, the University, including Wadham, was engaged in advising government and planning for the post war recovery. Dookie closed in 1942 when students and staff from Melbourne Grammar School were evacuated from Melbourne and all agricultural college students were sent to Longerenong.

When the new Principal George Woodgate reopened it later in 1942 he had both Dookie's returned students and the Faculty's second-year students. Educated and capable, Woodgate also assisted the demise of the overly cosy Council of Agricultural Education by enlisting fellow graduates in the University and the Department of Education and persuading politicians to adopt an informed approach to agricultural education.

The Agricultural Colleges Act of 1944 spelled the demise of the colleges' governing Council, the last decision of which was to 'not approve the acceptance of Indian students until adequate provision is made for local students'. The Act transferred trust funds and endowment lands to the Crown, thus killing the vestigial remnants of the Land Grant College dream. Woodgate, now a member of the University Council and Faculty Committee as well as Superintendent of Agricultural Colleges, selected James Provan to succeed him as Dookie Principal.

"Old Agriculture" around 1930[114]

Proven oversaw short courses for around 1,000 returned servicemen as well as the diploma program and stayed in the role for 23 years. Caught between college intransigence and rapid post-war advances in Australia, he managed increased enrolments of year 12 matriculants and soil conservation field days in conjunction with the International Harvester Company, which had underwritten much of the College's 23 miles of contour furrows and grassed waterways.

After WW II, restrictions on animal studies in the Faculty and on Public Service employment for graduates were relaxed at the same time that facilities were stretched when 150 students enrolled in the BAgrSc, half of whom were ex-servicemen supported by government. From 1943 Dookie had again become the site for the residential practical year, which as large numbers of returned servicemen entered the course, also strained the College's capacity such that in 1947 25 of the 45 second-year students were accommodated at Dookie and the balance at Longerenong. Two years later, Dookie could accommodate all students and the Faculty ceased using Longerenong. But a University memorandum made it clear that 'The scheme recommended is intended as a wartime measure. Neither the Council of Agricultural Education nor the University nor the Department of Agriculture should view it in any other light.'[115] Nevertheless, by the end of the war, Faculty recommended that Dookie become the permanent home for second-year students who were to live and work on the same basis as Dookie students, pay the same fees and be subject to the authority of the Principal. Facilities were inadequate at the colleges, just as they were at the University where they were not improved until 1956 when an extension to Old Agriculture was facilitated by a gift from Wadham's friend and flour miller, V. Y. Kimpton – hence the Kimpton Theatre.

Through Wadham's extensive activities, contact with Longerenong increased but was not significant for the Faculty's course. Woodgate had become Principal in 1928 and government funding fell with the 1930s depression followed by WW II. Managing frugally, the College's Jubilee was cancelled and some modest works were overshadowed by a fire that destroyed the main buildings. Ivan Tulloh was appointed Principal in 1940 and in his collegial manner oversaw building, courses for Land Army women, the relocation of Dookie students through 1942 and introduction of a three-year diploma, albeit hamstrung by compromised entry requirements. Tulloh's son Norman was to later become a Professor of the Faculty and its longest serving member. A new entrant into the field of agricultural education was also foreshadowed although it would take two decades for real action on the estate of Marcus Oldham to begin. From about 1939 Trustees of that estate began to consider suitable sites in southern Australia and New Zealand for an agricultural college.[116]

At the Burnley School, Prescott's 1911 Certificate of Competency in Horticulture remained the standard into the 1950s. J.P. McLennan became Principal in 1916 of what soon became the School of Primary Agriculture and Horticulture, which developed new rootstocks for apples and pears and raised a Jersey dairy herd. He was succeeded by Frederick Rae in 1921 who oversaw retraining of ex-servicemen, increasingly with assistance from a Master's graduate from the Faculty, Alexander Jessep. Their student cohort was bifurcated between girls with good academic records from private schools who regarded Burnley as a finishing school, and boys who chose Burnley because their academic results were inadequate for the University. Jessep became sole Principal in 1926 and his tenure saw the Plant Research

Laboratory moved to Burnley, but the School remained best known for its pruning demonstrations. The 1930s depression brought courses for the unemployed and secondary school students studying agriculture who soon outnumbered horticulture students.

When Provan became Principal of Burnley in 1942 improvements in infrastructure began and were continued under Thomas Kneen from 1946. Despite its central building being the first major building project undertaken by the Public Works Department since WW II, Burnley's technology was antiquated in its reliance on draft horses and hand mowers. Student numbers rose to 100 through the 1940s, but a decades-old curriculum and an increasing concentration on short courses meant that the institution had little educational standing and its graduates were not preferred by city councils. The Institute of Park Administration of Victoria duly lobbied for a three year 'Diploma in Horticulture equivalent in standing to the Diploma in Agriculture issued by Dookie and Longerenong Agricultural Colleges'.[117] Burnley's rise in agricultural education began without any intent to link with the Faculty.

The Department of Agriculture founded the School of Dairy Technology and Dairy Research Laboratories in 1939; it later became the Gilbert Chandler College (or Institute) to service the 'dairy produce manufacture and preservation (improvement) of quality' by 'skilled instruction to dairy factory operatives', and research.[118] The two-year course followed that developed at Massey University and led to a Certificate of Competency in Dairy Manufacture with electives of butter-making and cheese-making until its temporary closure in 1942. The school had minimal association with the Faculty at this stage.

In parallel with the Department of Agriculture's schools, the State Forests Department established the Victorian School of Forestry at Creswick in 1910, relying on teachers from the Ballarat School of Mines and a Board of Examiners led by University botanist and once Dean of the Faculty, Alfred Ewart. Expanded in land area in 1912, its Principals were T.S. Hart, Charlie Carter, Karl Ferguson and Ted Semmens, a botany graduate from the University. Until the 1940s an annual intake of four to eight students undertook an Associate Diploma of Forestry – 'The Gateway to a Man's Career'; women were not eligible. But that career was limited by the Australian Forestry School at Yarralumla in the 1920s such that the Institute of Foresters of Australia was reluctant to equate the Creswick diploma to the Canberra-based qualification; the Australian Forestry School was eventually to become part of ANU in 1965.[119] Creswick graduates were thus mostly confined to Victoria where they were supported by the Forests Commission. The best diplomates could continue to the University, which in 1943 created a BSc(For) degree and in 1945 appointed John Chinner as Senior Lecturer in Forestry in the Faculty of Science. The Forests Commission had by now increased Creswick's intake to about 12 and the school was overseen by teaching Principals, Frank Moulds, Bill Litster, Alan Eddy, Jim Edgar, Bob Orr and Ross Squire, five of whom were graduates of the University. Other contact with the Faculty was marginal, and while Wadham's personality facilitated working relations with Botany, the success of his Faculty engendered some jealousies. Beloved by all subsequently, his portrait commissioned upon his retirement in 1956, has graced the lobby of the Dean's office in the Old Agriculture building for at least 17 subsequent Deans

Portrait of Sir Samuel Wadham by Carington Smith

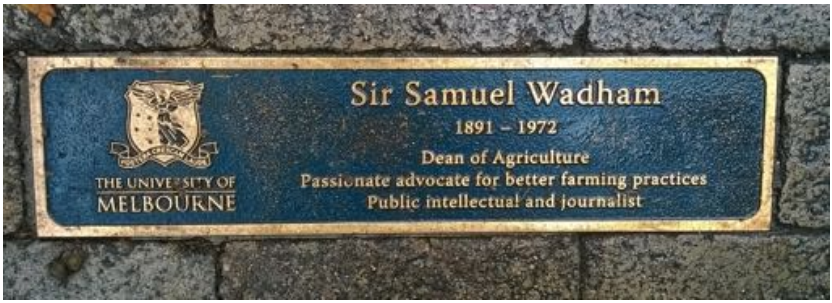
The Faculty focused on an agricultural education that integrated science compared to the diverse activity of the agricultural, horticultural, dairy processing and forestry colleges. Demand for Faculty graduates increased throughout the 1940s and the Agricultural Education Act of 1949 supported research and teaching in animal science with capital works and senior lectureships that were filled in 1950 by T. J. Robinson – animal physiology, and F. J. R. Hird – Agricultural Biochemistry. Students also gained their voice and in 1953 the Agricultural Students Society petitioned the Dean to modify the undergraduate course structure to improve the physics subject, increase the statistics courses, revise assessment methods and improve integration across the course. This was considered to be 'heady stuff in those days when students tended to be seen and not heard',[120]

though similar voices were to be raised in Sydney and Western Australia. The Faculty responded to these concerns, although it took another 21 years to integrate student voices institutionally by inviting undergraduate and postgraduate representatives to sit on the Faculty Committee.

Beyond the University, Wadham served on such commissions as: The Commonwealth Dairy Committee (1928-1930); the Royal Commission on Wheat, Bread and Flour Industries (1934-36); the Commonwealth Nutrition Commission (1937-40); the Rural Reconstruction Commission (1943-46), and the Immigration and Planning Council (1949-59). Wadham's Sunday morning radio chats made him one of the best known broadcasters in Australia, spicing humble advice with humour and widening agriculture from the technical to the social sphere in an uncommonly holistic worldview. Practical college graduates knew technical applications and University graduates knew the theory and its application, but Wadham saw agricultural science as integrating complex fields that demanded more than technical knowledge, and as transcending small family farms. These were all part of his philosophy that maintained that it is important for a University 'to provide when called on, an unbiased opinion on matters of public interest, especially in the technical field'. He lived this philosophy through his commissions and the hundreds of speeches, broadcasts and articles to produce the considered summary that, 'perhaps no other person in the history of the University had so enlarged the influence of his Chair and formed such close associations with the particular community he represented'.[121]

Wadham received the rare distinction of an Honorary LLD while still in the University's employ. He had certainly

helped the image of the University and advanced agricultural science significantly. Similarly, it was noted that 'the growth of goodwill towards the University at the time of his retirement among the public, especially the farming public, owed much to his influence and personal reputation.'[122] Knighted in 1956 for his services to agriculture, Wadham retired early in 1957, continuing to serve his vocation as part of the Martin Committee on Tertiary Education in Australia (1961-64) and as Chairman of the Council of International House at the University. His memory is preserved with other University luminaries outside the Baillieu library by a plaque set into the pathway of Professors' Walk.



Imparting a legacy of broad-minded scientific understanding in agriculture, Wadham may be seen as the Great Dean of the Faculty. Some consider this an anomaly for one who was neither a specialist nor intimately involved in technical research. Others see Wadham as the personification of the integration that defines sound agricultural science education, which requires a foundation of contextual understanding of science, sociology and economics applicable to industry and government. He was the man for his time in agricultural education and his personality allowed communication across the agricultural colleges. In his view the University and the colleges were quite different,

and without saying so directly, he appeared to see the future of agricultural education being with the University.

He saw the:

> 'further development of agricultural systems in most districts of Australia [as] a question of improved technical efficiency based on a scientific approach to problems of soils, plants and animals. It is a matter of brains, not brawn, consequently the future development of the agricultural faculties should be assured always provided that they continue to recognize that their chief function is to train students for applied positions in the public service and in commerce. Many university faculties have a tendency to regard research work as their main objective. While everyone who understands the inner spirit of university life will readily admit that research is an important part of every effective faculty, some are apt to forget that the purpose of almost all the applied faculties which have been created in Australia is to train students for their respective professions.'[123]

In his final year, Wadham appointed another young Englishman Derek Tribe as Reader in Animal Physiology to replace Robinson who had been appointed inaugural Professor of Animal Husbandry at the University of Sydney. Unlike his predecessor Robinson who had remained in his Department of Physiology, Tribe was based in the Faculty – heralding the developments which were to take place under the next Dean, Carl Forster.

Chapter 6

The Forster Decade – 1957-68

Carlisle Forster was appointed Dean from 1957 from his post with CSIRO. Firm yet kindly to some and 'earnest but uninspiring'[124] to others, he was well organized and well connected. Combined with a US PhD and practical farm management knowledge this earned him wide respect. His tenure included the expansion of PhD education in Australia and an increased focus on research. After the Murray Committee recommended increased Commonwealth funding to universities at a time when wool and wheat prices were high, doctoral research was well supported by such sources as CSIRO scholarships and the Reserve Bank's Rural Credits Fund. Forster's decade might therefore be defined by the Faculty's expansion of research and postgraduate training. At this time undergraduate first year intakes were limited to 70.

New staff defined a new approach with such appointments as: Norman Tulloh, Geoff Pearce, Rolf Beilharz and Tony Dunkin who joined Derek Tribe in Animal Husbandry (later Animal Production); Jack Wilson, Gerald Halloran, Albert Pugsley and David Smith joined Yvonne Aitken in Plant Production; Alan Lloyd and Al Watson started an Agricultural Economics Unit; Don Williams, Hartley Presser, Jack Potter and later Stuart Hawkins introduced postgraduate training in Agricultural Extension. The Faculty thus rounded out a considered balance of the diverse disciplines that made up agricultural science at the time.

The Faculty grew to become a leader within the University for PhD training. Continuing the Wadham tradition, staff maintained close links with industry, speaking at field days, dinners and conferences. The interaction was assisted by the Faculty's lack of its own field research facilities forcing staff to conduct research on private farms, government lands and in shared research facilities. Research spanned all of Victoria and parts of Southern NSW, and international activities commenced. Several staff advised in agricultural education, research and development nationally and internationally, bringing experience back to the lecture and seminar rooms, and attracting the first overseas students to the Faculty. Leeper surveyed soils on farms near Winchelsea and Berwick, while Tribe studied prime lamb production with the Mornington Peninsula Prime Lamb Producers Association and on the State Research Farm at Werribee, which in 1964 became the University's veterinary clinical centre. Tulloh's beef cattle work was conducted at the Metropolitan Board of Works Werribee Farm.[125]The period was one of collegiality across staff and students, with a sound output of higher degrees, research papers and books.

Carl Forster

But the Faculty needed its own field site, and in 1964 Mount Derrimut, 'the pretentiously named small knoll'[126] in industrial peri-urban Deer Park was purchased at a favourable price from ICI Australia Ltd (now Orica) with assistance from the ICI Chairman, Leonard Weickhardt, who later became Chancellor of the University.[127] The site was only 22 kilometres from Melbourne and provided reasonable control over field research. It also allowed the practical residential year of the BAgrSc course to be shifted from Dookie, thus finally settling arguments that had persisted since the 1930s. The educational quality of the practical year at Dookie had been of concern, which was, from 1958, addressed by the appointment of David Smith to oversee the year's teaching. The move to Mount Derrrimut facilitated further strengthening of the year to include substantial field projects, excursions to significant farms, research centres and industries, specialist lectures, and improved library resources. Smith became the Mount Derrimut Farm Director, teaching as well as overseeing students in residence; males were housed in the Mount Derrimut House training facility left by ICI and a self-contained unit was created for female students. Facilities eventually catered for 60 students who enjoyed a new lecture theatre, laboratories including an agricultural engineering centre and a well-equipped farm. The Faculty's variable level of interaction with Dookie and other colleges now declined markedly.

Dookie suffered from the loss of the Faculty students. Its difficulties were compounded by the State Department of Agriculture's colleges, in common with other parts of the public service, having to direct income to consolidated revenue, so the colleges entered yet another phase of indecision. This caused the Premier to initiate one of the few

cases of curriculum collaboration between the Faculty and the colleges by bringing Forster to assist Beruldsen in planning a new college curriculum and associated facilities. Particularly at Dookie, entrance requirements were raised, a Diploma of Agricultural Science was designed and the college's objective was updated. Rather than 'teach the principles and practice of agriculture to the sons of farmers and those who intend to adopt farming as a vocation', the college was now 'to train agricultural technologists in the basic technical and scientific principles underlying all aspects of agriculture'. The reference to scientific principles being introduced at a college posed no challenge to the Faculty.

Provan implemented the reforms at Dookie, which saw an initial doubling of students to 234, but by 1968 enrolments were again in decline. Similar changes were implemented at Longerenong where Pym Cook had become Principal in 1955, but drought was to forestall progress after Kneen became Principal in 1967. These times saw stock sold, water rationed, student failure rates soar and staff numbers decline. The reforms led to Burnley College of Horticulture being created from its namesake school and offering a Diploma in Horticultural Science after abandoning its dairy operations, with Littlejohn becoming Principal in 1967. Meanwhile Gilbert Chandler, which had reopened in 1948, began to benefit from the industry underwriting its personnel's attendance at a three-year Diploma in Dairy Technology; in 1959 the research and demonstration factory facilities were improved.[128] But apart from Forster's role in the new curriculum and the personal interests of a few staff, the State Department of Agriculture's colleges were drifting further away from interaction with the Faculty. The trend was substantiated a few years later by the preparations for

another agricultural college, Glenormiston in the Western District – a region already being serviced by the private Marcus Oldham College, which had accepted students since 1962.[129] In proportion to its size, Marcus Oldham College was to have a greater impact on regional, Victorian, Australian and international agriculture than the State's colleges.

Foreshadowed since 1939, Marcus Oldham College was a bold and fresh approach to agricultural education that should have led to reconsideration of the drive for regional coverage in government funded education. Trustees of the estate that established Marcus Oldham were constrained to cater only for the 'sons of Protestant parents' from the site finally selected near Geelong. Delayed by WW II and acrimony heightened from the Presbyterian Church, implementation began from about 1958 when among others, Forster and Wadham were engaged as advisors in parallel. The main planning consultant was Ivo Dean, who had once worked at Longerenong and who became the first Principal of Marcus Oldham when it was officially opened in 1961.[130] Alert to the technological and economic changes occurring in agriculture in south-eastern Australia through the 1950s, Marcus Oldham focussed on farm management. The farm was run commercially with its course based on practical studies that were continuously assessed and included weekly farm visits and a sandwiched practical year. Marketing was nationwide to attract students capable of paying the substantial fees. Such marketing, combined with a small flexible staff networked with agribusiness, defined the College. The college council routinely included representatives from both the Faculty and the Veterinary Faculty[131] and was said to be a more engaged council than ever existed for the State's colleges.

Forster was Dean, but even in retirement his eminent predecessor remained present, a complication not always appreciated in the era. Wadham is remembered from around 1964 by one who would become Dean of some four decades later as actually occupying the Dean's office in the south-west corner of Old Agriculture; that young academic at the time and now retired recently observed wryly 'you couldn't move him out, could you!'.[132] Forster's tenure coincided with a period of expansion of the University of Melbourne as the nation prospered. Enjoying political influence as the only university in Victoria, its Faculty could demonstrate that it served a different clientele from that of the agricultural colleges. With capital development funds flowing from industry research organisations and a public appeal launched by the Chancellor, who had recently retired from serving as Prime Minister, a Pig Research and Training Centre was established at Mount Derrimut – it appears that such schmoozing was not the colleges exclusive preserve. New programs were developed, such as a postgraduate Diploma in Agricultural Extension in 1966 that was supported by the Victorian Wheat Industry Research Committee. Such external funding marked the Faculty as different and privileged within the University, and was further supplemented by additional capital and research funds through the State Department of Agriculture. This was to cease in 1968 when the 1920 State Act expired. The Faculty then became more similar to other faculties in its reliance on the Commonwealth for annual operations.

The State Department of Agriculture continued to offer training through its agricultural colleges in increasing isolation from the Faculty while seeking to link the training and extension divisions' activities. As extension became a more specialized activity, it was seen that a sound education

in communication principles was required and the State Department underwrote a postgraduate Diploma in Agricultural Extension to which it sent its key staff. This effectively 'formalized' the rural connections developed by Wadham[133] as a function of his peripatetic personality, and established a new niche for the Faculty. As Hawkins made the diploma his own, the Faculty became renowned for the course, and Hawkins himself was one of the few from the Faculty invited to teach a course at the newly arrived competitor in agricultural education, La Trobe University.

Old Agriculture around 1955[134]

La Trobe created a forward-looking undergraduate agricultural science degree, and it appears that the University, or perhaps the Faculty, were complicit in allowing it to develop. The Faculty's growth of total enrolments from 84 in 1951 to 220 in 1958 was curtailed by a first-year entrance quota of 70 imposed in 1959. Thereafter, increases in total Faculty enrolments were

postgraduates. In 1960 Forster, undoubtedly thinking of the wider agenda 'heralded the consequences of these decisions and suggested that a second school of agriculture is required in Victoria'.[135] Monash University was the likely choice for another course in agricultural science, with the naïvely unintegrated suggestion that it could emphasize plant science on the assumption that the Faculty would focus on animals.[136] A Victorian review committee estimated that a first-year intake of 140 was needed to satisfy the State's demand,[137] which came to pass with encouragement from the Australian Institute of Agricultural Science – then the association of professional agricultural scientists. After 1966, the Interim Council of La Trobe University moved to create a comprehensive course in agricultural science with an initial intake of 20 in 1968, which was planned to rise to 100 by 1974.[138] As these developments took place, the Melbourne Faculty was myopically preoccupied with its comfortable position, largely unbothered by the University administration and so overlooked the implications of La Trobe's course.

The Faculty's response needs to be considered in the context of the overall University's health, which University historian Carolyn Rassmusen characterized as follows. 'The University in the 1960s was a loose federation of partially self-governing parts, essentially reactive with a high propensity to go on doing things as they had always done, to make-do with whatever could be cobbled together, and compete fiercely with each other. There was much quality, but its existence was more by luck than design. Superficially, the institution was held together – and more or less facing in the same direction – by something called "collegiality" – but the systems of governance were not robust enough to deal with the rapidly changing environment and expectations from the

outside.'[139] The Faculty may claim to be part of the 'luck' and to have fared better than most other small faculties. But luck derived from political contacts, tied State funding and an upsurge in student demand did not enhance the overall Faculty's image as a premier provider of agricultural science education after local competition arose.

The national leader at the time was seen to be the rural University of New England in NSW, which had revised its curriculum to adopt an integrated approach consistent with the demands of agricultural science. The Faculty felt little competition from this interstate university until the same philosophy was implemented on their doorstep and supplemented by a rigorous interview entry requirement in addition to high matriculation results. La Trobe University opened its integrated and more up-to-date agricultural science course and took advantage of the Malthusian fillip of a growing awareness of the precariousness of global food production and rising population, as well as the abolition of tuition fees by the Whitlam government in 1973. A new generation of agricultural scientists was to result from this expansion, but the Faculty was not sufficiently cohesive to fully grasp the opportunity. The effect for the older universities such as Melbourne was to dilute their interest in agriculture over time. Over the ensuing three decades, agricultural education was to become dispensable to some other institutions. The Faculty wandered, sometimes unknowingly, in a wilderness it had not imagined.

Innovations in agricultural education were slowly appreciated within the Faculty – computers were reluctantly seen as more than a passing fad – but with the continuing farmer disbelief in 'non-practical' education and the University's urban orientation, a gap between the city and

the country became discernible. It had been there from the earliest days, albeit bridged by Wadham, and gradually widened through the 20th century. It was one force among others that progressively marginalized the image of agricultural science education within many metropolis-based universities. Minor resurgences were to occur and an echo of the 1960s interest in global food precariousness arose after the 2008 global food shortages, which led in NSW at least, to renewed attention to agriculture education.[140] But the science base of agricultural science cannot be turned on at will. Hence, the Academy of Technological Sciences and Engineering's program and similar initiatives in schools for enhanced STEM education[141] – science, technology, engineering and mathematics – in schools is today having some effect in preparing students for demanding agricultural sciences courses at universities. But whether the integrated agricultural science courses will re-emerge is unclear. The contrast between Forster's era and that which was to follow might be paraphrased as a loss of long-term leadership of the Faculty in the face of a newly competitive environment. Thus Forster's years led into the 1970s with student demand increasing and for a time assisting the Faculty, but it was research and an international perspective that were to redeem other deficiencies of the time, and these relied on more than luck.

Forster retired in 1968 at a time when Australian university enrolments were booming. He had maintained diverse connections with the farming community and government, and most notably had been Chairman of the Committee to Appoint and Advise the Commonwealth Government on Prospects for Agriculture in the Northern Territory in 1960. Meanwhile, building on interest spawned in the 1950s 'staff in the Faculty … developed a deep and continuing

involvement in the Colombo Plan and other projects in Asia and a few in Africa, and [Faculty] academics took the lead in developing the organization of universities which became the Australian-Asian Universities Cooperation Scheme.'[142] Forster had fostered international connections that were unique in the University, and so it was fitting that he became the first Academic Director (1970-77) of the Australian Asian Universities Cooperation Scheme in which capacity he advised senior administrators in Indonesia, Malaysia and Singapore.[143]

Original Entrance to the 'Old Agriculture' Building

Chapter 7

Rotating Deans – 1969-89: Tribe, Stubbs, Tulloh, Chinner, Parbery, Beilharz & Ferguson

Having begun with a rotation of Deans during its first two decades, the Faculty followed Wadham's three decades and Forster's one with another period of rotation. The Faculty now re-entered two decades of Deans' tenures being two to three years. Upon the retirement of Forster, it seems that Lionel Stubbs served as Dean for a short period in 1969,[144] and the Faculty instituted a two-year term for the Dean who was elected as *primus inter pares* in common with practices of the time.

Later in 1969 Derek Tribe was elected Dean and soon changed the regulations to allow an appointment for up to three years. And in what might today seem to have been a fit of extreme collegiality, the position was opened to any permanent academic from Senior Lecturer level to Professor. Serving for at least three years (1969-72), Tribe was to become the longest-serving Dean for the next two decades.

Around this time, Stubbs was Chair of Plant Production and Alan Lloyd became Chair in Agricultural Economics, which was created to replace Leeper's Chair in Agricultural Chemistry. The Faculty was restructured from the traditional soil, plant and animal departments into a single department with five sections; agricultural economics,

agricultural extension, animal production, plant sciences, and soil sciences. These sections were led by Lloyd, Stuart Hawkins, Tribe, Stubbs and Lyle Douglas.

Without belittling the influence of other Deans, some detail about Tribe is relevant to the Faculty's culture and longevity. As a key appointment by Wadham and as a fellow British immigrant, Tribe had enjoyed Wadham's patronage while enduring the same parochial assumptions of ignorance of local conditions. He challenged the latter by spending his first Christmas break *en famille* working on a farm, both to learn and to establish a credibility that allowed research programs to be farm-based in the absence of adequate Faculty facilities. Having been inspired by a 1947 meeting with Lord [John] Boyd Orr[145] and his food-based humanitarian ethic that led to the creation of the Food and Agriculture Organization, Tribe maintained an undiminished enthusiasm for the global food dilemma. This provided the international context for his local research and teaching, a direction he later encouraged other staff into through cooperation with Asian universities, and to which he contributed in the creation of the International Livestock Research Institute as one of the 'Green Revolution' centres of the CGIAR.[146] In these ways, Tribe assumed the mantle of Wadham, and claimed him as a primary mentor and friend in his biography.[147]

As Dean, Tribe oversaw a review of the undergraduate course that confirmed it was broadly-based while allowing minor specialization in fourth year through a small research project, and also introducing a new compulsory subject – Resource Use and Conservation. While Agricultural Engineering continued to generate demand, it was thought better pursued in the Faculty of Engineering where it was to

continue for two decades serving the Faculty as well as graduates that taught its practical aspects in the agricultural colleges.

These were not easy times for the University. Funds were tight demanding stringencies on faculties including this one, which was forlornly asking 'for resources to appoint a full-time Dean'.[148] Thus the short tenure of Deans through this period of the Faculty's life can be explained by discipline leaders taking turns to accept the distracting responsibility of the office with the incidental benefit of helping to ensure that their discipline was not overlooked within the Faculty allocations. Deans after Tribe were; Stubbs (1973-75), Norman Tulloh (1976-78), John Chinner (1979-80), Doug Parbery (1981-83), Rolf Beilharz (1984-86) and Ian Ferguson (1987-1989). Tulloh lays claim to a unique association with this history having been born to the Principal of Longerenong, gaining his BAgrSc and DAgrSc from the Faculty, and then working in it as a Research Assistant, and after an interlude of eight years with CSIRO, as a Senior Lecturer and rising to Professor – and now in his 90s continuing an association with the Faculty. During Stubbs tenure as Dean, the Department of Forestry, which had been part of the Faculty of Science since 1948 was transferred to the Faculty. Once it was renamed the Faculty of Agriculture and Forestry, a north wing extended the Old Agriculture building with improved facilities especially for fourth year and postgraduate students in 1975; it is slated for demolition and replacement in 2018. Forestry was accommodated in the Old Agriculture building[149] and laboratories were built at Mount Derrimut from the Brumley Bequest. The retention and indeed enhancement of the Derrimut facility was the Faculty's expression of the observation of the times that 'pressure on university

undergraduate training for graduates to be job-ready, [had] already vocationalised university education in Australia far more than is admitted'.[150] The observation recalled the University's nickname of an earlier generation as 'The Shop'.[151]

Derek Tribe Lionel Stubbs Norman Tulloh
John Chinner Doug Parbery Rolf Beilharz Ian Ferguson

The vocational element of agricultural science education further loaded already-crowded courses – it was one reason for the courses requiring high academic workloads over four rather than the usual three lighter years for some other undergraduate degrees, and having required projects during term-breaks. The longer course was a further reason for its reduced popularity among urban students, and it involved additional costs to the student. Tuition fees had been synonymous with universities, which had been established under State Acts but were only partially funded by the State. This restricted university education to the wealthier families until it was slowly redressed with some Commonwealth

funding during WW II and continuing after it. The merit-based Commonwealth Scholarship Scheme would soon be introduced, which waived tuition fees for capable students and provided a living allowance to those whose parents did not have sufficient means to support their children's studies. By the late 1960s higher education was available to bright students from working-class families. Such high-performing students from a wider catchment was to serve agricultural science well. The Commonwealth then abolished fees from 1974 until 1989 by which time the unsustainable expense of an enlarged sector was supplemented by introduction of the innovative scheme that allowed postponement of a proportion of the cost of the course until a beneficiary's income exceeded a threshold a little above average weekly earnings. The scheme has been repeatedly modified, but does not appear to have aided agricultural education as much as some other faculties.

As noted by the Council of Deans of Agriculture, students are more reluctant to take courses with diverse employment openings.[152] Demand for university agricultural science from farmers remained low[153] and 'this has allowed criticism of the knowledge levels of persons charged with managing the bulk of the country's terrestrial resources'.[154] This is evident in the comparison of the low prevalence of degrees among those on farms compared to that of the general workforce, as is illustrated in the following Table. Having to share benefits with the new course at La Trobe, the windfall of Commonwealth scholarships and rising global concerns about food was muted within the Faculty, which was increasingly diverted to research and international activities, as well as some property development. The seeds of research unrelated to teaching were sown in this period. Looking back on the period, Stubbs advised academic staff to

not 'become obsessed by your "tools of trade", that the detection of a divided genome assures more importance than the solution to a problem'.[155]

Proportion of those Engaged in Agriculture with a Degree
(as a % of those with degrees in the Australian workforce)[156]

Year	1984	1994	2004	2009	2012
	21%	31%	27%	28%	39%

In 1976 the Strathfieldsaye Estate, valued at $588,500 was bequeathed by Clive Disher to the University for teaching and research in agriculture and allied sciences.[157] With its historic homestead on Lake Wellington and its 1,845 hectares carrying 7,000 sheep and 100 Hereford cattle, the property was a valuable resource, although it required commercial acumen to be productive after wool prices declined. Both the Faculty and Veterinary Science used and oversaw the facility. The University was to remove control of the property from the Faculty through the 1980s after which it accumulated contentious book debts; it was reclaimed for the Faculty by a later Dean in 1996 and was a viable business until, contrary to his advice, it was divested by the University soon after his tenure.

Faculty research, which had been negligible before the 1950s in common with other Australian universities, increased markedly through the 1970s, and by 1983 research grants worth some $1.5 million and involving 40 staff and 70 postgraduates meant the Faculty ranked highly in the University's research income. Joint research with the State Government and CSIRO supported applied research oriented to industry. Postgraduate training grew and then

levelled off from the mid-1970s as stipends fell in relative value in a volatile economy and so made early employment attractive. From six higher degree research candidates in 1972 the number then grew to 31 in 1983, with an increase in candidates from developing countries. Some Faculty academics regarded these overseas candidates as compromising academic standards, a view that was successfully countered by a wider perspective on the integrated and global nature of agricultural science. Having begun in the 1960s, international postgraduate candidates were mainly generated from personal contacts in Southeast Asia, as well as elsewhere in Asia, Africa and Central and South America. With the creation in 1969 of the Australian-Asian Universities Cooperation Scheme (later Australian Universities International Development Program, now IDP Limited), most staff were involved with Southeast Asian universities. The Faculty provided the first three Directors of AAUCS/AUIDP – Carl Forster was succeeded by Norman Tulloh in the part-time role and then, when a full time appointment of Director based in Canberra was created, by Derek Tribe.[158]

International students also influenced the Faculty's offerings, which until the 1970s had assumed uniform student backgrounds and an understanding of Australian agriculture. A Master of Agricultural Studies was created with coursework, research and field study; initially for animal production, in 1981 it was expanded with funding from the Australian aid program (AIDAB, later AusAID). The Faculty's and hence the University's profile rose throughout Southeast Asia as student numbers increased to 28, mostly funded by the aid program. A review on behalf of AIDAB indicated the course's academic value and viability for funding on a full-fee basis charged per student with the aid

program purchasing sufficient places to justify operations; this was preferred to the so-called fully funded model, which the review had found to leave the Faculty subsidizing the aid program.[159] The degree was complemented by the Faculty-run Southeast Asian Fibrous Agricultural Residues Research Network, which was also initiated in 1980 with initial support from the aid program. Connecting ruminant nutritionists across Sri Lanka, Thailand, Malaysia, Indonesia and the Philippines, the network focused on improved utilisation of crop residues. Within a decade the network was self-sufficient, and its subsequent iterations became activities of the Australian Centre for International Agricultural Research (ACIAR) upon its creation.

Having proved useful, the model of the Master of Agricultural Studies was adopted for an improved iteration of the postgraduate extension diploma as a degree in agricultural extension oriented to Australian students who were, in the main, sponsored by employers, especially the Department of Agriculture. Other activities of the Faculty through the 1970s were somewhat routine with continuing arguments about the contributions of international students, a perhaps overly precious view of the University and assumptions that family farming would remain sustainable. The aura of rural stability had confounded agricultural education for decades as a result of misplaced government subsidies. But such 'financial assistance to farmers had only been of use in the long term if it assisted farmers to move from unprofitable systems of farming to those that were profitable, or in helping farmers to increase the scale of their operations'.[160] An era of change was beginning in the sector – and in agricultural education. The Faculty's BAgrSc remained in demand, but it suffered from the part-time and short-term rotational Deans – and a lack of anticipation of

the impact of competition from the more rigorous degree at the upstart La Trobe University, which took its first agricultural science students in 1968.

The 1975 Fawn-brick Extension of 'Old Agriculture'

The new La Trobe University's high founding ideals were consistent with the times. It viewed of agricultural science as its 'hard' applied science, and being its fifth and only professional School in the absence of medicine or engineering, it was relatively more important to La Trobe than it was to Melbourne. In 1975 science students made up less than 25 percent of La Trobe's 7,758 enrolments and agricultural science was its only applied area. By this time student demand for higher education appeared to have been met, government outlays were frozen and La Trobe's ambitions for growth and diversity were curtailed. Victoria had corrected anomalies resulting from Melbourne's long monopoly, which had been identified in 1961 when it was claimed, somewhat gratuitously, that with 4.8 percent of the 17-22 years-old students it compared unfavourably to 7.2, 7.2 and 7.9 percent for NSW, Queensland and SA respectively.[161] Although misleading, because Victoria's

higher education institutes and colleges were omitted and because the State supported the highest national rates of student participation in year 12, the figures reflected Melbourne's sole claim to the title of university in Victoria. The Faculty's lack of preparation for this new environment and internal preoccupation allowed La Trobe to advance its program.

La Trobe's academic organization through Schools rather than faculties and departments was soon compromised, although it was retained in the School of Agriculture under the firm hand of the Foundation Chair Bob Reid who recruited 'most of its early staff from outside the groves of academe'.[162] As Foundation Professor of Agriculture, Reid defined its difference from the Melbourne course in a manner reminiscent of Wadham,[163] although at the time more often attributed to McClymont[164] of the leading agricultural science course of the time at the University of New England. Instilling his stamp on livestock through his Inaugural Lecture in 1968,[165] he also established standards in learning, and critical thinking. 'Disregarding the thrust of the advertisement for the La Trobe post which anticipated the need for future specialist graduates, [Reid] based his application in terms of a strong commitment to a broad, integrated course in which the interrelationships between climate, soils, plants, animals and economics, and their dependence on a sound basis of primary sciences – chemistry, physics and mathematics – was stressed.' He 'appointed staff in sympathy with his convictions' who retained the integrated school structure after he retired, as the only La Trobe School to maintain the university's original vision. The demanding course matched La Trobe's student intake being 'so small that a high proportion of admitted students had listed [it] as their first preference' including

'some very high quality students'[166] – and this was combined with a ruthless culling of underachievers. The competition for the Melbourne Faculty was perhaps exacerbated by Reid's negotiation to engage key staff and inputs from the Melbourne Faculty to teach into his course, such as the rural sociologist Stuart Hawkins, and use of Derek Tribe's text for animal physiology; his first appointment and ultimately longest-serving member of the School was the leading soils postgraduate from the Faculty, Nick Uren. The first home of the La Trobe School was coincidentally the Thomas Cherry building, which had been named after the chair of the academic planning board for the new university, who was a son of the original advocate for the creation the Melbourne Faculty and its inaugural Chair of Agriculture in 1911.[167]

The march stolen by La Trobe eventually sunk in and the Faculty caught up with La Trobe. Stubbs observed that 'one day in the mid 1970s I was told by someone in industry that they preferred La Trobe graduates over Melbourne because Melbourne graduates were not computer literate … Within a short time, the Faculty went on to lead the University in its teaching of computer use and the applications of computer technology.'[168] But the Faculty was also pursuing another development in which Tribe's view that international students would broaden the Faculty's understanding and international standing was vindicated, and Leeper his *bête noire* retired. Tribe himself left in 1980 to take up his appointment as the Director of the Australian-Asian Universities Cooperative Program. Stubbs also retired at the end of 1981 having also established research facilities and postgraduate training activities that would be built upon. The vacated Chairs in animal and plant production were filled in due course by Adrian Egan and David Connor in 1983.

Reviews of the BAgrSc and the BForSc courses undertaken in 1984 led to revisions in offerings. The former course was forced to recognize the changing nature of graduate employment, which was shifting away from positions in the Department of Agriculture and other State departments. From this time, the course was ostensibly oriented to the integration of agriculture's economic resource use within conservation principles. It continued to produce generalists, with specialization coming in postgraduate studies. Such reorientation brought inevitable discussion about the balance between pure and applied sciences, between plants, animals, soils and social science, and between agriculture and forestry. In the mid 1980s, rising star Mike Dalling left to establish Calgene Pacific, a molecular biology subsidiary company that retained links with the Faculty for a time through personal affiliations; Stubbs served on the Calgene Biosafety Committee,[169] and a Dean who would arrive in the Faculty a decade later served on the Calgene Pacific Board.[170]

The Faculty had minimal contact with the agricultural colleges, which meant that a recommendation to cease the Derrimut second year raised the old chestnut of the need for farming skills. The compromise in an academic environment increasingly separated from both farming and agribusiness was to claim that the required 12 weeks of vacation work would fulfil the practical need.

Commonwealth funding for Creswick had encouraged it to associate more closely with the Faculty after 1973, which finally reached agreement with the Forests Commission in 1977. As Dean from 1979 to 1980, John Chinner bedded down the amalgamation, which allowed for BForSc students to spend two years in residence at Creswick and its diploma course was then terminated. Ian Ferguson was appointed to

the Foundation Chair in Forestry in 1981 and oversaw the new course while developing an industry and research profile in the Faculty. Ralph Beilharz was elected Dean of the single department Faculty in 1984 followed by Ferguson in 1987. As had their predecessors, they felt the conflict of academic and industry demands with the rising administrative load on the Dean's office. Poised for changes that were only to be slowly admitted, the Faculty was suffering from a malaise compounded by the University's adjustments to its lost monopoly. However, outside the University, the period saw changes in agriculture and agribusiness that would continue for decades. Combined with policy shifts in higher education funding, this was to drive institutions to consider the costs of duplication and sub-optimal size. A Unified National System with institutional mergers was coming on to the agenda.

Through this period of change, the variable fortunes of the agricultural colleges continued, but interactions with the Faculty were limited and the rural colleges became more isolated from the wider society. It is therefore apposite to consider the rural colleges in a little more depth since in two short decades, as a unified entity, they were to try to negotiate with the University on equal terms. But long before that time, the cultures of the two sectors were far apart, even on issues of social equity. Without abusing hindsight, the admission of women to agricultural education provides a barometer of social awareness; and considering the reliance of the rural colleges on political favour, it is surprising that rural women's votes and lobbying were ignored for so long – until 1972, as the following Table indicates. Across Australia, 'there seems to have been an epiphany in the 1970s as many of the institutions progressively, but suddenly, became coeducational',[171] partly in response to

affirmative action and anti-discrimination legislation.[172] But the fact remains that the colleges were remarkably tardy in acknowledging their social milieu. Today it is not uncommon for more than half of the students of agricultural science in universities to be women. That it took a century for women to be allowed to enter the agricultural colleges illustrates the cultural gap between the Faculty and the rural colleges. A counter argument – that Burnley admitted women from 1899 as part-time students – is belied by its operating as a suburban gardening association day-school that soon morphed into a finishing school for young ladies.

Women at the Rural Colleges and the University/Faculty

Year and Event	Women Accepted into:		
	University Degrees	Agriculture Degrees	Colleges' Diplomas
1879 - University of Melbourne admits women	Yes	n.a	n.a
1883 - First woman graduate, University of Melbourne			
1884 - Letter to *The Age* arguing the *necessity of including agricultural colleges for females* and that *for every girl educated in this manner now, in the next generation it would count six at least, for the girls of the present day are the mothers of the future and their sons will benefit by their teachings as well as their daughters*			
1886 - Dookie College opens			No
1898 - Longerenong College closes; Council minutes record that suggestion that it could instead provide instruction in agriculture to young women was *acknowledged*			No
1902 - The Women's Progress Leagues Union asks Council for			No

women to be admitted to Dookie and received the reply: *unable to accede at present … there being no provision for women students*			
1905 - University opens Faculty of Agriculture		Yes	
1915 - Third-year Agricultural Science student from the Faculty Irene Lowe spends mandatory year at Dookie.			No
1915 - The Australian Women's National League urges Council for women *to be provided with the means of securing an agricultural education*; reply approves women in principle, but none admitted			No
1915 - Longerenong receives two applications from women that the Principal declines			No
1919 - YWCA deputation from the UK visits and advised Council to appoint a *trained lady organiser* in domestic arts and hygiene			No
1919-30 - Short courses for women at Dookie and Longerenong when men on vacation			No
1951-3 - Two-week courses for Women's Land Army at Longerenong during the men's vacation after CWA pressure			No
1945 - Daughter of Dookie Vice-Principal, Jean Levick, enrols			Yes/No
1947 - Jean Levick graduates with diploma			No
1964 - Faculty ceases to use Dookie for practicum			No
1972 - Faculty graduate, Joan Houghton, and CWA lobby until five women admitted to Longerenong			Yes/No
1973 - Dookie admits women			Yes

Rotating personalities also marked the colleges; Kneen became Principal at Dookie as enrolments declined towards the ten-year low of 1972, a problem that had been compounded by the Faculty ceasing to send its second-year students there after 1964. Longerenong faced a similar challenge with Ian McMillan as Principal. Underfunded, neither practical nor intellectual, having shed specialist lecturers and now short of students, Longerenong and Dookie finally admitted women in 1972 and 1973 respectively. McMillan became Principal of Dookie from 1974 when he handed Longerenong over to Jim Lonsdale, who became the college's longest serving Principal. Both colleges consolidated non-award courses and a Diploma in Agricultural Science was created to complement diverse VET/TAFE courses. Barry Croke became Dookie Principal in 1983 and oversaw the introduction of a three-and-a-half year BApplSc(Agric) degree that included a semester of industry placement.

The agricultural colleges were struggling to adjust to the times and saw decreasing demand among innovative farmers. This should have been seen as a precarious environment in which to create new agricultural training facilities, especially where another provider already operated. Thus when Glenormiston Agricultural College opened in 1971 with Bob Luff as Principal, he quickly sought to reorient it to general farm management and equine studies. Its high quality facilities were soon complemented by a full-sized indoor equestrian centre, in part to service an Associate Diploma in Horse Management. Val Pollard became Principal in 1979 and set about expanding TAFE programs, strengthening outreach and trialing a new BApplSc program. Meanwhile a Rural Studies Centre, McMillan, was created in Gippsland as a further agricultural

training facility to which Brian Clarke was appointed Principal in 1976. Non-award courses overlapped with extension agents' roles, which inspired Barrie Bardsley as Principal from 1985 to develop distance education and TAFE funding while maintaining some 100 non-award programs for 3,500 people across 50 locations.

The creation of both Glenormiston and McMillan can seem anachronistic in hindsight. McMillan was invented, at least in part, as Gippsland's call on government largesse in response to Glenormiston being created in the Western District, which had arisen by use of the region's political clout. But Glenormiston itself opened less than a decade after the private Marcus Oldham College, which had already claimed a greater Western District loyalty than Glenormiston was ever to garner. Furthermore, the course that Glenormiston promoted was Farm Management, the same as that already established at Marcus Oldham. It has been argued that the high costs of Marcus Oldham excluded many ordinary 'farmer's sons' (in the terminology of the colleges), which is largely correct although some equity scholarships were offered. But considering that a transition towards agribusiness from traditional farming was already occurring and the colleges were following rather than leading the change, farms with sufficient access to capital to afford the Marcus Oldham course were more likely to provide future leaders in agriculture management and agribusiness than those from a State agricultural college. Later decades bore out this analysis.

Marcus Oldham marketed itself well, and charging significant fees bred a loyalty and commitment among alumni in a manner akin to elite private schools. Nevertheless, enrolments were never high and by the late

1970s were particularly low, which added motivation to overturn the limitations of the original bequest, to which the Supreme Court agreed in 1979 by allowing enrolment of both males and females without religious restriction.[173] Having shaped the College as Principal for some 16 years, Ivo Dean was followed by Graham McConnell for another 18 years to 1994. Sticking to its aim 'to assist highly motivated young men and women to become leading farmers in the future',[174] the Marcus Oldham College Council continued to include representatives from University.[175]

The State Department of Agriculture's other colleges, Burnley and Gilbert Chandler shared the rural colleges' lack of contact with the Faculty. Burnley had once enjoyed a high scientific profile until the Department removed research from the inner suburb; this included such research as that of the Faculty's Lionel Stubbs on plant pathogens like tobacco mosaic virus as an indicator in lung cancer traces.[176] In fact the colleges now had little to offer the University having pursued a different market sector while constrained by public sector regulations. At Burnley, Principals Littlejohn, Pell and David saw diplomas of Horticultural Science and later Applied Science introduced, the staff profile change, commercial horticulturalists appointed, fruit and vegetable instruction transferred to Dookie, and loss-making short courses continuing. At Gilbert Chandler, industry had recommended 'additional staff with special responsibility for working closely with industry',[177] which Principals Peter Mullaney, Ian Stevens and Peter Ryan from 1978 managed through short update courses, TAFE certificates, correspondence courses and goodwill sharing of facilities between research and training. In retrospect such moves, if sustained, would have revivified the colleges' relevance.

David Smith was now Director-General of Agriculture for the State and was ultimately responsible for the colleges after many years' experience as a staff member of the Faculty. He expressed dismay at a proposition to form an umbrella organization of the six colleges as the Victorian College of Agriculture and Horticulture (VCAH), and noted the distinction between university education and college aspirations in higher education. His advice to his Minister was that if colleges were to be removed from the department, they should be allocated to regional and technical institutions rather than universities. However, the government changed and Smith and colleagues 'decided against our better judgement to form VCAH in our own way, protecting the extension services and short courses of the Department'.[178]

VCAH was duly constituted to take over the assets and liabilities of the six colleges of the State Department of Agriculture. Burnley, Dookie, Gilbert Chandler, Glenormiston, Longerenong, and McMillan were to become a single institution, albeit one infused with the agro-political legacy of the colleges. VCAH courses ranged from in-service training and short courses through TAFE diplomas and embryonic higher education degrees. Victoria remained the nation's agricultural State and perhaps, as some argued, needed a broader spread of colleges than others. However, the expectation that separation from the public service and a new industry advisory council would usher in a long awaited golden era with funds from the Victorian Post-Secondary Education Commission (VPSEC) was not to be realized. VPSEC was initially resistant and political intervention was needed to quieten the matter until the Victorian College of Agriculture and Horticulture Act was passed in December 1982.

Luff was appointed Director of VCAH, a small complex institution competing for TAFE and higher education funds, which through entrepreneurial funding inspired by Deputy Director Nigel Wood, flourished for a time. The largely conservative VCAH had appointed the Labor-sympathizer Wood in the hope of gaining access to higher education funding from the national Labor government. After Wood invited key departmental and ministerial advisors to accompany him on a charter flight around the rural campuses and escorted them to those around the city, higher education funds began to flow.[179] State VET/TAFE funding followed.[180] Nevertheless, by '1987 CTEC contributed just 20 per cent of the VCAH budget', most of balance being VET/TAFE or short course income.[181] Then a Commonwealth policy to amalgamate institutions was announced and it became clear that VCAH must seek to merge with a compatible partner. University Vice Chancellor David Penington notes, 'Directors of Victorian CAEs visited my office to explore amalgamation during 1988 and 1989. I gave each a cup of tea and discussed with each the nature of their college. I suggested possible amalgamation partners. I saw no reason to disrupt their worthwhile activities which differed greatly from ours, and wished them well.'[182] This opinion soon changed, and as with the history of each of its founding colleges, the path to VCAH's amalgamation with the Faculty was not destined to be smooth.

An outsider looking back from the 1990s expressed the opinion on 'coming into Victoria for the first time I have always found the 1984 decision by the Victorian government to entrench the College system in the form of VCAH and turn their backs on the emerging federal CAE system with its capital funding and engagement with postgraduate education was a very blind gully. Being familiar with

Hawksbury, Wagga and Gatton which diversified as CAEs and progressed to universities the impacts are obvious'.[183] But the Victorian mood was still very much one of being different, perhaps even superior to other States – and it was superior in terms of agricultural outputs, which needed a more integrated agricultural education system to underpin its continuity.

Old Agriculture: Greenhouses in System Garden for Construction of Zoology, 1986[184]

Notwithstanding the challenges of the decade and the Faculty's inadequate continuity of management, it was a relatively cosy and collegiate place for the traditional academics of the time. Perhaps that explains a somewhat rosy perspective from within the Faculty in 1984 to the effect that Faculty graduates were 'spread widely throughout the community' and internationally, and publications in 'journals with an international circulation' reflect the

Faculty's influence 'across the world'.[185] While accurate in general, the Faculty was to require a quite different approach to catch up to the world and for its impending absorption of VCAH.

Chapter 8

Transition Times – 1990-95: Egan & White

In 1990, Adrian Egan was elected Dean for three years, which extended to four, after which Robert White filled the position for 1994 and early 1995. It was a period of transition from the old rotational Deans and preparation for an executive function that could implement the merger of VCAH. Changes in the BAgrSc introduced fourth-year electives and, following earlier initiatives at La Trobe, digital learning. The viability of Mount Derrimut in a modern course had finally been addressed, and after 1987 no second-year students had resided there. Excursions substituted for field residence, and no real consideration was given to a return to Dookie or Longerenong, which by now were campuses of the Victorian College of Agriculture and Horticulture (VCAH). In the light of recommendations to link with La Trobe University and VCAH, it might have been expected that this change in the wind might have stimulated more formal interactions with La Trobe, but despite Faculty initiatives the University was to prove reticent.

Egan had been appointed as Chair of Animal Science in 1982, initially jointly with the Waite Institute, to lead livestock research which also led to his teaching into the Faculty of Veterinary Science. His appointment had complemented that of David Connor who moved from La Trobe University to the Chair of Plant Science. Over the next seven years before he became Dean, Egan coordinated the animal

scientists in the Faculty to benefit from the Meat and Livestock Research and Development Corporation's successful foray into joint industry and government research funding and continued the AUIDP legacy established by Carl Forster and Derek Tribe. And seeking to widen such beneficial coordination, he proposed joining with La Trobe University, the Victorian Department of Agriculture, CSIRO and the VCAH, based on the old model of the Scottish system and its analogues in the US Land Grant Colleges. But this was stymied by competing interests and conflicting advisory boards, such as that of the Centre for Farm Planning and Land Management (CFPLM – sometimes referred to as the Potter Farm) which had relied on philanthropic rather than research funds. The vested interests that had developed over the previous rotational Dean period precluded much internal cooperation. Egan had seen all this, having been Deputy Dean from 1986 and thought such matters could be improved, but when elected Dean in 1990 he was not expecting the major changes that would result in successive reviews and progressive shifts in University policies.[186]

Mt. Derrimut Field Station: 1964 to 1986[187]

Coincident with Egan's assumption to Dean, the Commonwealth's McColl Review of Agricultural Education[188] required a response, which Connor coordinated with Egan. Preparing these data was to be a boon to a Faculty on the brink of change, for it required analysis of student numbers and employment, postgraduate and research numbers, income, and detailed curriculum and teaching assessments. At this time, the Faculty's minimum entrance scores for the BAgrSc exceeded those of the University's BSc, and about 40 percent of students were female. The draft McColl Review listed the Faculty as the State's Recognized Provider, but as for other States with more than one university offering agricultural science, this recommendation was softened to a requirement that those States each select one Recognized Provider themselves.

By this time the La Trobe School was beginning to rely on inputs from other Schools in their university, and despite Faculty interests in selected teaching and research collaboration, detente between the highest echelons of the two universities was fragile. At the same time, preparing for the taking over of VCAH was to become an increasing distraction throughout Egan's term. As a University decision that largely excluded the Faculty and surely did not represent its desires, it was assumed that absorption of VCAH could be accomplished in the same manner as the earlier relatively smooth amalgamation of the Creswick School of Forestry into the Faculty.[189] But Creswick was a single campus and there were pre-existing arrangements, which contrasted with uneven relationships between the campuses of VCAH and the University; and even more complicating, the driving force was now external politics rather than rational concentration of expertise.

The McColl Review had studied agricultural education within the requirements of the Federal Minster for Education John Dawkins' Policy Statement of 1988,[190] which had led to implementation a Unified National System that was incentivized by more flexible triennial funding aligned to performance. Institutions with less than 2,000 students (EFTSU) could only become eligible if they merged or established formal relations with a larger institution. Seeking economies of scale, the policy further encouraged institutions with less than 5,000 EFTSU to also merge to form comprehensive teaching and research institutions, for which 8,000 EFTSU was considered a realistic target. Embedded within the changes was a general undertaking to withhold incentives from merger proposals that diminished services in rural areas. VCAH's rural presences and lower than the required student load meant that it had to either seek a merger partner or attempt to raise additional revenue through other means. A century's experience informed the five-year old VCAH of its limited opportunities to achieve the latter.

Relying on the Dawkins White Paper Report, the 1990 McColl Review considered effectiveness, relevance and demand across the nation's 24 institutions providing degrees in agriculture for some 11,000 students. Its main recommendations focused on; integration between disciplines and research organizations; flexibility in responding to community demands; articulation across course levels; enhanced staff capacity; widening of offerings, and improved postgraduate training. It suggested that Recognized Providers for agriculture and related education be those that offered at least three of eight major categories of study, had at least 450 EFTSU, operated from TAFE to PhD levels, and were part of a multi-faculty institution.

McColl also suggested that Melbourne and La Trobe should seek means to cooperate in agricultural science, even going so far as to suggest that they rationalize their programs into one course.

The final version of the review painted a rosy picture of potential collaboration that was not widely shared within the concerned institutions. It concluded that:

> in Victoria, the institutions of interest are La Trobe University (which is amalgamating with the Bendigo College of Advanced Education from 1 January 1991), the University of Melbourne and the Victorian College of Agriculture and Horticulture. Melbourne University's enrolments in agricultural and related education are not far above the minimum number while those at La Trobe are well below. Both institutions only offer courses at the four-year and postgraduate level, and the breadth of offerings by each faculty is limited. On the other hand, the VCAH has substantial enrolments and a good breadth of courses although its postgraduate education is minimal and is only just being developed. Discussions are underway concerning the amalgamation of the University of Melbourne and the VCAH. The panel considers that these discussions should be broadened to encompass La Trobe's agricultural and related education offerings with a view to a single provider emerging in the region. As is the case with Sydney, consideration of the details of such a reorganisation needs to be undertaken following in-principle acceptance that a single provider emerge. Particularly relevant to the Victorian situation will be a decision on where responsibility for TAFE courses should lie and the implications for the individual campuses of the VCAH.[191]

For Victoria, the most intensely agricultural state of the nation, the Dawkins and McColl reports warranted high priority. The State had tacitly supported two universities offering agricultural science degrees since the opening of the course of La Trobe University's School of Agriculture in 1968. VCAH with minor higher education activity was seen by both as an innovative and rising player operating largely within the TAFE sector. Competition between the two universities meant that La Trobe, while initially offering a more rigorous McClymont-influenced integrated course than Melbourne,[192] had more recently been constrained by changes in La Trobe's internal policies and by Melbourne's greater general popularity. Lingering Melbourne resentment about the establishment of the La Trobe School had precluded deep collaboration. When VCAH came into play Melbourne's interest was at least in part motivated by keeping it from La Trobe.[193] Vice Chancellors and their Deputies from all extant Victorian universities passed through VCAH's doors through this period – all flirting with the idea of amalgamation.[194] Luff saw the only two possibilities to be the universities that had agricultural courses – Melbourne and La Trobe – and preferred Melbourne because of its size. He conducted a straw poll of VCAH staff, most of whom were Melbourne graduates, to confirm the decision.[195] Discussions then began between the VCAH Director's office and the University's Vice Chancellor's office. Within the University, this meant that the Faculty had relatively little input to the preliminary discussions that set the scene from 1988 and would eventually lead to merger after a decade of angst.

Deft use of National Party contacts and robust lobbying led to a Heads of Agreement between VCAH and the University being signed in 1989.[196] Land, always close to the hearts of

those in agriculture, led to the first of many disagreements. The University would assume VCAH liabilities if they were accompanied by its assets, the most valuable of which were its extensive lands. The State Training Board on the other hand argued that Longerenong and McMillan with mainly TAFE and short courses should remain Crown land. The University prevailed after securing Commonwealth funding to cover the full costs of higher education courses and a surety that the State would cover the remaining deficits.[197] Resolving these and other matters in an increasingly fearful atmosphere, the University expected the merger to be effected by mid 1992. It was to take five more years during which time staff in both VCAH and the Faculty were drawn into further distracting argument. Promises to cover deficit costs for the operation of VCAH facilities were soon forgotten.

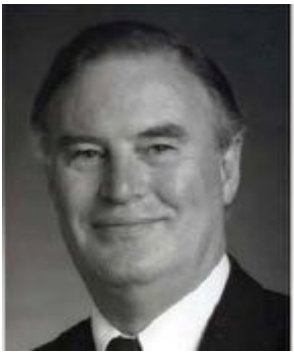
When affiliation – the term by now morphing to become 'amalgamation' – discussions began in earnest in 1992, the University followed the McColl review but ignored the single provider recommendation. Rapprochement between Melbourne and La Trobe, however logical it might have been, would have required different personalities at each university's helm. More University-commissioned reports and reviews were to ensue.

First, Capp and Caro conducted a 10-day University review of VCAH administration across all of its campuses and senior personnel and concluded that 'the University has much to gain from the amalgamation with VCAH'. In expressing the hope 'that University staff will take an interest in the College and make use of its facilities' the report implies the marginal role played by the Faculty itself in the process. The more significant Greenland review[198] was commissioned around

the same time by the University, and it raised further Faculty tensions with the University administration from 1992.

In seeking a means to amalgamate, the Land Grant College concept was variously invoked by the Greenland review and Egan and also embraced by the University as a model of convenience. Superficially, the concept rested on the extensive farmlands of Dookie, Longerenong, and Glenormiston as potential research sites linked through teaching and research with the Victorian Department of Agriculture's facilities at Werribee, Hamilton, Horsham, Ellinbank, Kyabram, and Tatura. The dream of such self-funding assets was attractive to the small Faculty that had recently shed the costs of its Mt Derrimut residential year.

However, affiliation and the still distant goal of merger required honest and open sharing of information that was not always forthcoming from either the University or VCAH, which had been structured as a company limited by guarantee after it was separated from the State Department of Agriculture. A such a legal entity, it was not compelled to share information, which further hobbled attempts for full cooperation. Meanwhile, with the 1992 appointment of Robert White as C.R. Roper Professorial Fellow in Soil Science, the Faculty decided to create, with the support of the Victorian Education Foundation, postgraduate courses in soil science and soil management in collaboration with La Trobe, which had recognized strengths in the soil sciences.[199] At this stage, the Faculty was still proceeding as if the Recognized Provider ideal of the McColl Review could become a reality involving the two universities and VCAH. But the University had no desire for such integration with La Trobe.




Adrian Egan **Robert White**

The University-commissioned Greenland Review of the Faculty was to examine the needs of agriculture and related education consequent upon the affiliation of the VCAH with the University. Noting the rapid advances in agricultural science and technologies, the review argued for improvements in education to serve efficiency gains in agricultural industries, enhanced integration of environmental concerns and resource conservation, and a greater focus on the Asian region as a market. Among specific recommendations were a focus on food and dairy science, a suite of offerings from TAFE through undergraduate applied science degrees to postgraduate research, linkages with the State Department of Agriculture and the Faculty of Veterinary Science, with which it was suggested within the University that the Faculty might merge. This last suggestion was quickly stymied by competition among the animal scientists, but like most long-term objectives was to be successfully resurrected two decades later.

This was a period when VCAH should have been consolidating its new independent structure, but its

management was divided between a head office dealing with such consolidation and handling discussions with the University and Heads of Campus continuing their past styles. Courses ranged from in-service training and short courses through TAFE diplomas and higher education degrees. Luff retired and Barrie Bardsley was appointed VCAH Director in 1994 supported by Company Secretary and Deputy Director, the omnipresent Nigel Wood, for the important financial and management matters that were to feature in the amalgamation. At the campuses, developments through this period included, at Dookie, appointment of some more qualified staff, expansion of the degree program, and rationalization of some short courses into TAFE programs. Research, never a mandated activity of VCAH or its predecessors, developed later with the Joint Centre for Crop Improvement (JCCI) with the Victorian Institute of Dryland Agriculture, which was nominally associated with Longerenong, while Burnley and Gilbert Chandler dipped their toes into postgraduate, mainly coursework, degrees. Glenormiston struggled in the new VCAH world of accreditation and academic creep – as did McMillan to an even greater extent. Through the same period VCAH's major benchmark, Marcus Oldham College, continued its focus on farm management-cum-agribusiness and considered offering a focused degree course.[200] Marcus Oldham Principal Graham McConnell maintained the college ethic of a practical diploma rather than a degree course, but by 1997 the intake was only 23 when total enrolment was around 100. Academic creep within VCAH followed a national trend for colleges that was evidenced a little differently in the new Marcus Oldham course, which was a response to specific demands from its supportive fee-paying clientele. Faculty contacts with Marcus Oldham were less than in the past,

especially now that VCAH issues occupied the University's and Faculty management.

If the University's strategy aimed to re-establish its dominance in agricultural science over La Trobe by absorbing VCAH, that outcome was to be facilitated from about 1990 by La Trobe's missteps. Having begun with rigour and its university's support, La Trobe's course under Bob Reid expanded in an orderly manner in student and staff numbers. Its Chairs since inception had been Reid (1967-74), Ted van Stevenick (appointed 1976), John Freebairn (1977-86), Pat Carnegie (1979-87) and Tony Chisholm (appointed 1988). Despite being the new-comer and in a difficult location, skilful staff appointments and close social engagements with students complemented an ethos of careful entry selection and standards that had been established by Reid from its 1968 outset.[201] La Trobe's lead over the Faculty is said to begun from that initial intake and to have continued through the 1980s when it progressively began losing its integrity and then key staff. Some stars continued at La Trobe through the 1990s, but overall the course and the School's heyday had passed[202] and the university itself cared less for what had once been its flagship applied science.

In this wider context of Victorian agricultural education, the Faculty was the largest higher education player – yet it was only variably dominant and the University's objective to lead in all fields was being reasserted. The Faculty was out of tune with the University administration, which led to some unproductive initiatives that were mostly stillborn, such as a 1993 University proposal to start the BAgrSc with second-year students from the BSc course. Feeling thwarted and voiceless in the University, Faculty staff pursued their

research, which strengthened the Joint Centre for Crop Improvement with the State Department of Agriculture and should have helped the VCAH Longerenong campus had it been receptive, and a joint postgraduate activity in soil science. The CFPLM (Potter Farm) also sought to involve the campuses of VCAH.

Faculty staff had learned to be wary – not just of change, but also of VCAH's political clout and of the University overriding the Faculty's past cosy collegiality. Older Faculty staff now found decisions that they considered their business being made by the University administration. The Dean found his authority undermined at times, and though armed with honourable educational intentions was confronted by political necessities. This was an environment in which the colleges and thus VCAH had been formed and was the experience that had honed their acumen over a century. Such contentious times can be productive as academics bury themselves in their research, and thus papers and books flowed out of the Faculty and research income rose and with that the reputations of some staff.

Egan's Deanship became complicated in isolation from University decisions, yet he continued to make his substantial contributions to various University Committees, while maintaining a high teaching, postgraduate, postdoctoral and research load in addition to international advisory missions. Through this period, he revived an innovation of the cadetship program that assisted in enhancing the Faculty's attraction to bright students. But by 1993, he had come to the realization that the Faculty could no longer be run by a part-time Dean elected by the Faculty and endorsed by the Vice Chancellor and Council. He consequently suggested that the new University process of

an international search for an Executive Dean be followed. Stepping down, Egan recommended Robert White act as Dean while the search was undertaken. Egan reverted to his role as Head of the Animal Production Section and soon attracted ARC funding to create the Joint Facility for Food Animal Research at Werribee,[203] replacing research facilities that had once been at Mt Derrimut.

Appointed by the Vice Chancellor to 'hold the Faculty together' while a new Dean was sought, White took the Dean's office in 1994 after having spent two years in the Faculty. His candid summary over the 22 years since his initial appointment to the present is an 'abiding impression of the Faculty being in disarray'.[204] Attributing this state to the one-size-fits-all Dawkins reforms that purported to improve the quality, diversity and equity of access for higher education, he sees the specific reform directives that Colleges of Advanced Education become universities and that mergers occur to achieve expected economies of scale as having failed. But the University justified its desires by stating that the Faculty should grasp the opportunity 'to become a leading player nationally in agricultural and related education by amalgamating its small and underperforming Faculty of Agriculture and Forestry' with VCAH.[205] To this end the University had nuanced the Dawkins reform through McColl's more specific recommendations for agricultural education by engaging Greenland to review the Faculty as a means of facilitating amalgamation with VCAH and ignoring La Trobe.

Using the credibility of that 'external' review, a Working Party of the University Council's Joint Committee on Policy influenced the Council decision to create a Faculty on the model of the US Land Grant Colleges insofar as it would offer

a continuum from short courses through TAFE programs to research conducted in collaboration with the State departments of Agriculture and Conservation and Natural Resources, and with CSIRO. The University Council duly approved: creation of a new Faculty of Agriculture, Forestry and Horticulture; the Chair of Agriculture being linked to the position of Dean of the new Faculty; creation of a new Chair of Agriculture (Soil Science) to which White was to be appointed; a Chair of Pasture Science; combined degrees that included agricultural science, and formalization of the Joint Centre for Crop Improvement and the Centre for Food Science and Engineering.

Through 1994 White attempted to 'reconcile the disparate interests of the leaders of the discipline "fiefdoms" that had ruled the old Faculty' in his dual capacity as Dean and Head of its Department of Agriculture, which was soon to be appended by 'and Resource Management' after he broadened the scope of the BAgrSc to include natural resource management. With University support, White oversaw the early retirement of several senior academics while increasing research activity through new younger appointments – all seen by the University as preparing for the appointment of the as yet unidentified new Dean. As Egan had found to his chagrin, the University was firmly in charge and the Faculty often found itself pushed towards options it considered unacceptable, such as the potential streamlining of joint Faculty and VCAH administration being used as an excuse for successive attempts to remove the Faculty from Parkville to Werribee or to the Veterinary Precinct in Flemington Road. Neither the Faculty nor VCAH wanted this or other University initiatives like moving to Dookie, which led VCAH to emply its skills to slow progress; a tactic employed again in 1995 when it surprised the

University by renewing the lease on the VCAH offices in East Melbourne for three years – but by then there was a new Dean more used to business dealings. At the same time White's rational approach was further interrupted by attempts by the Faculty's Department of Forestry to be co-located with the Victorian Department of Conservation and Natural Resources.

The University's 1993 Working Party on Agriculture and Related Education had disingenuously recommended that the amalgamation be based on 'a research management plan involving VCAH to the extent that is judged appropriate'.[206] As White notes, the culture of a research-intensive university aspiring to high world rankings was always incompatible with a vocational education institution with 'no remit to carry out research'.[207] The fantasy was eventually abandoned in the next decanal period when vocational courses were managed as a discrete unit. Meanwhile for higher education, 'as [the proportion of tuition fees potentially payable by students] rose, undergraduate student numbers dwindled and minimum entrance scores declined'.[208] But fees might be seen to be only part of the story when national and worldwide trends in declining enrolments in agricultural education are considered, as discuss elsewhere.

The product of the Working Party, the Faculty of Agriculture, Forestry and Horticulture, was to come into being from the end of 1994 with two departments – Agriculture, and Forestry – and a School of VCAH. It would be the largest provider of agriculture and related education in Australia, operating from nine locations. In the event, the new Faculty was delayed until the new Dean could take up his Chair in early 1995, whereupon White withdrew from

administration to lead various research programs in soil, water and nutrient management in Australia and overseas.

Despite this era being characterized by its main actors as 'all the fiefdoms, everywhere the fiefdoms and nothing but the fiefdoms',[209] good work went on in the tradition of insular academics. In hindsight we may see it as a period of transition between that of the rotating Deans with limited influence and sometimes factional alliances and that to come with an Executive Dean empowered to effect change. The transition was traumatic for some of the players as has become common within intrigue-indulgent universities, but it was nevertheless a productive period in terms of both research outputs and Faculty development. It forestalled whimsical suggestions that the Faculty be closed or merged into Science. But like the Hydra of mythology, these and other monstrous ideas would reappear.

Chapter 9

Merger and Acculturation – 1995-99: Falvey & Lee Dow

One hundred and ten years after the main college and ninety since the creation of the Faculty, the oldest and the main agricultural education components in Victoria were finally to become one. In 1994, a Dean had been secured with an executive role. Lindsay Falvey had managed a large international consulting group in agriculture and engineering for 15 years after a decade in applied research in Asia and Australia. He met the University's requirement for academic credibility mixed with private sector and management experience. This period of the Faculty's history is perhaps the best documented, including historical consideration of the University's experience with mergers,[210] mention in the memoirs of the Chancellor of the time,[211] and an e-book of Falvey's perspective.[212]

Animosity and intransigence had become entrenched after prior attempts to merge the Faculty and VCAH. Falvey felt the merger could be completed within three years by which time he predicted that he could well be unpopular and should move on; Vice Chancellor David Penington suggested five years on the grounds that career academics can forestall change for about three years. Falvey accepted the tenured Chair of Agriculture, and five years as Dean after a week-long discussion with long-term mentor Derek Tribe with whom he was engaged on an assignment in Thailand at the time. Tribe's induction of Falvey into University politics assumed

a continuation of his 1970's vision, which in turn he saw as continuing Sam Wadham's.[213] While Falvey saw Australian agriculture in a similar global context to Tribe and Wadham, he also came with a private sector view that agriculture extended far beyond the farm, and that the University should focus on serious future farmers and agribusiness. The new Faculty was to be vastly larger and was to be managed quite differently from its older constituents.

In retrospect it is fair to say that the University grossly underestimated the challenge of the merger, and naively assumed it would follow the processes that had integrated the Melbourne College of Advanced Education into the University. However, that merger into the Faculty of Education had taken several years of planning and gradual integration for what was a much simpler task, since it involved two Melbourne-based campuses and was all higher education. By contrast, the VCAH merger schedule could not be considered piecemeal and was complicated by TAFE/VET courses and the integration of six additional campuses, four of which were in rural regions. The Victorian Minister of Education preferred to have VCAH integrated with one institution rather than fractured between perhaps more logical providers of TAFE/VET, and preferred the University to other universities in the State.[214] Given the history and these compounding factors, the VCAH merger was never going to be smooth and would require University resolve and consistency, both of which were destined to falter at key times.

On the Dean taking up the role in early 1995, VCAH became an affiliated School in the Faculty beside the Department of Agriculture and the Department of Forestry. But unhelpful relations had developed over the previous years and in the

understated terms of the 1997 Faculty history,[215] amalgamation 'concerns developed to a level which retarded progress'. In fact, notwithstanding attempts of consultation and inclusion, hostile opposition to the machinations surrounding the proposed merger had developed within both the Faculty and VCAH, which each felt marginalized to some extent in the process. The new Dean saw the initial task to be one of conciliation to bring the antagonistic parties together so that a merger could be effected.

Lindsay Falvey **Kwong Lee Dow**

Recognizing the fears of VCAH that its segment of agriculture would be subsumed within the University, and those of the old Faculty that academic standards and research would be diluted, Falvey canvassed key players before officially taking up his appointment. He also visited the most active land grant universities (LGCs) in the USA before implementing his program in order to boost credibility within the vague philosophical bases being espoused by both the University and VCAH. While using the LGC rhetoric for strategic purposes, the wider context of Falvey's approach was Australian agriculture in the international arena, as indicated in his inaugural professorial lecture.[216]

Recognizing the need for loyalty and confidentiality in the Dean's office, he soon appointed a new Personal Assistant, Mary Vatsaloo, who had served him in that capacity for several years in the private sector. After loyal supporter Ian Pausacker resigned from the role of General Manager to follow his interests, the Dean welcomed Janet Beard to the role in 1997; Beard, a graduate of the Faculty with high level administrative experience from La Trobe, would prove invaluable to the Faculty over the ensuing eight years.

Invoking authority to a vision that he encapsulated in a book sponsored by the Rockefeller Foundation with an introduction by the World Bank Vice President,[217] Falvey 'worked hard to integrate the VCAH operations in preparation for the unified [Faculty]. Five departments were created, each of them working across several of the campuses, and requiring a cumbrous management structure of faculty officers, heads of department and heads of campus.'[218] While 'cumbrous', this was a negotiated strategy for integration such that each department and unit included staff from both the old Faculty and VCAH. Some 40 senior members, drawn from each department and unit, participated in a year-long strategic planning process that acknowledged the presence of Marcus Oldham and La Trobe University in the sector and sought to arrive at Faculty-wide agreement of agreed strengths – and inefficiencies.

Falvey brought with him his international agricultural contacts and vision as well as his private sector approach to welding cooperation through; a long-term strategic planning process, regular dinners with senior colleagues and spouses, and honorary doctorates for senior international figures including World Bank Vice President Ismael Serageldin, and the Thai international livestock scientist Charan

Chantalakhana. He also brought two Miegunyah Fellows to the Faculty, former Deputy Director General of FAO and Director General of a CGIAR Centre, Christian Bonte-Friedheim, and a senior agricultural advisor from USDA who particularly focused on bringing the colleges closer to the Faculty.

The colleges that now made up VCAH had made token moves toward amalgamation. At Dookie with Peter Ryan as Principal, more qualified staff were appointed, the degree program was expanded, old style courses were subsumed into TAFE programs and enterprises were managed more rigorously while student numbers doubled to 1996 and staff numbers declined. At Longerenong with Max Coster as Principal, preparation for the Joint Centre for Crop Improvement (JCCI) that was formalized with the Dean's appointment added to a suite of training ranging from farm apprentices to postgraduate candidates; JCCI was to bring Longerenong closest to the Faculty of all the campuses, yet even its integration was minimal. Burnley, with Greg Moore as Principal, expanded its higher education courses and commenced a limited doctoral program while maintaining TAFE courses in horticulture. Val Pollard continued to build Glenormiston through an Indigenous Rural Education Program and diverse industry courses while student demand wavered. At McMillan with Bob Gray as Principal, apprenticeship programs and certificates of Rural Office Practice and Farm Chemical Users catered for 22,000 people up to 1995. Gilbert Chandler Principal Joy Manners expanded facilities and bravely serviced short and TAFE courses and doctoral candidates with only 13 staff. Moore took over as Gilbert Chandler Principal until Malcolm Hickey was appointed in a joint agreement of VCAH Director Barrie Bardsley and the Dean.

In addition to bringing all parties into communication and preparing to merge ahead of the anticipated timeline, the Dean welcomed Bardsley succeeded by Hickey, as Deputy Dean. Engaging industry lobbies, regional farm groups, government departments, individual colleges, VCAH head office, Faculty staff and the University hierarchy in the preparations, Falvey's energy had the merger ready to be consummated by 1997. The revised Parliamentary Act was passed in April with an effectivity date of 1 July and University Statutes were approved in the interim. This was a year ahead of the expected schedule. In the haste to capitalize on the goodwill, some VCAH financial issues were left out of the final negotiation by silent mutual agreement. Some of these were to linger for two decades, one minor one concerning unclaimed funds from a defunct private arm of VCAH was only tidied up through the continuing goodwill of some Faculty retiree members of the Society of Old Agriculture Fellows (OAFs).[219] VCAH also brought back to the Faculty its longest serving professional, Jeff Topp, who was valued as the Faculty's institutional memory since he had variously worked in the Faculty and VCAH in a career that was to span 33 years.

Industry representatives on the VCAH Council had feared a loss of identity in the Faculty, which was addressed by a University statute allowing the Faculty to trade as the Institute of Land and Food Resources (ILFR), a name that encapsulated its constituent components. The VCAH Council, which was to become defunct upon merger, also required that their function continue in an advisory council of the Faculty, such that the committee known as 'the faculty' was henceforth referred to as a Board with external members. Falvey attempted to guide the Board in a corporate manner to formulate policy consistent with the objectives that had

smoothly led to the merger, although it soon became evident that the Board had insufficient appreciation of the functioning and responsibilities of a University or of the financial situation of VCAH that had been impending before merger. When some members engaged in unnecessary political intrigues, the Board ceased to be constructive and unsettled the Faculty.

The Faculty now included more than 400 staff across its nine locations and some 7,000 ha of land contributing to informal, vocational and higher education sectors. It was the largest agricultural education faculty in Australia by far in terms of academic staff, professional staff, budget, campuses and land. Its goal to lead internationally in fields of local relevance was implemented through new strategic professorial appointments jointly funded with the State Department, CSIRO or industry. Falvey met regularly with the State Department as it sought to relocate key scientific expertise, which saw six new jointly-funded Chairs created in the Faculty and focused attention on pasture-based dairying, milk processing, grains, oil seeds, forest industries, amenity horticulture, resource management and agribusiness.

Research increased apace through such entities as the CRC for Hardwood Fibre and Paper Science, the Mohan Singh-Prem Bhalla molecular biology laboratory, Robert White's soils group and the JCCI, among others. But the Faculty was running in deficit, mainly as a result of liabilities inherited in the merger. Functions such as campus catering were privatized and entrepreneurial use of Faculty assets was placed in the hands of Nigel Wood, now appointed as Director Enterprise Development; in this capacity he also assembled a sound outline for a Master in Agribusiness that

allowed funding to be attracted from the National Australia Bank and was to grow to become one of the Faculty's most successful courses.

Associate Dean for Research and Graduate Studies Adrian Egan structured funds 'allocated from the VCAH Company specifically for VCAH staff to build a research capability. The attempts to apply those funds on the bases of both merit and encouragement to adopt a research culture were greatly supported by Frank Larkins as [Deputy Vice Chancellor for Research] and his staff. It worked well for some but, in all but a couple of cases, getting off the ground did not translate to a foot on the ladder to gaining contestable funds in the research grants arena. For the seasoned researchers in the Faculty much of the research had historically required strong affiliations with external collaborators in the Victorian Department of Agriculture (however titled at various times) and Divisions of CSIRO.'[220]

Falvey had engaged in an exhausting round of consultations with rural constituencies and industry bodies, which included reference to the need to rationalize the Faculty to better service future agricultural and agribusiness needs. One special briefing of the assembled National Party members was conducted in the Victorian Parliament House jointly with the Vice Chancellor Alan Gilbert. Falvey enjoyed a close working relationship with Gilbert, the 'doyen of economic rationalist vice chancellors',[221] who was engaged in visionary expansion of the University's influence and land, and creation of a private university arm among other ventures. The aim of the consultations, especially those with politicians, was to forestall the type of regional backlashes experienced in the past, which was especially important to Gilbert while he nursed relations with Spring Street in

support of his grand initiatives. This sensitivity to Spring Street was to prove the Achilles heel for the Faculty when the Dean and Deputy later presented the Vice Chancellor with a budget management scenario.

The way forward was clear in Falvey's mind – he saw that much VET/TAFE was valuable, but not all of it, which offered opportunities to shift resources to where they were needed – in his view it was a case of agricultural education having strayed from the dictum that 'learning without thought is labour lost; thought without learning is perilous'.[222] He worked with the staff through a plan that required reduction of duplicative and marginal areas in order to support the new Faculty's focus on the major needs of future agriculture in south-eastern Australia. His work-plan indicated how new professorial appointments were made to lead the focus areas, which were to be paid for by some staff reductions in other areas and by jointly-funded appointments with government and industry, as presented in the following Table.

Among various developments at the time, one example is probably sufficient to demonstrate the modernization actions that typified this period. The Animal Welfare Science Centre – initially chaired by Falvey – arose from such a partnership with the State Department providing joint funding for Paul Hemsworth and including Monash University. The Centre was to grow over the next 20 years into a global centre uniting researchers from the US and Europe producing world-leading practical outcomes that have transformed government and industry and informed the public.

Academic area	Professor Name	Funding	Campus
Dean's Office			
Dean: Chair of Agriculture	Lindsay Falvey	Trust 1- 2.5 yr	P
Dep Dean: Fellow-Food	Malcom Hickey	DNRE in part	P
Animal Production			
Animal Science: Chair	Adrian Egan	ILFR	P
Dairy Science: Chair	David Chapman	Trust 1 1999	P
Dairy Science: Fellow	Jock McMillan	0.5 Vet Sci	W
Dairy Genetics: Fellow	Mike Goddard	0.5 VIAS	P/VIAS
Animal Welfare: Fellow	Paul Hemsworth	0.5 VIAS	P/VIAS
Crop Production			
Crop Agronomy: Chair	David Connor	ILFR	P (L)
Crop Science: Chair	Roger Cousens	ILFR	P
Crop Production: Fellow	Jim Kollmorgen	0.5 NRE	L
Resource Man & Hort			
Food Horticulture: Chair	Snow Barlow	0.6 NRE	P (D)
Soil Science: Chair	Robert White	Trust 2	P
Food Sci and Agribus			
Agribusiness: Chair	Ellen Goddard	0.5 NAB	P
Food Science: Chair	Margaret Britz	NRE	GC
Food Science: Fellow	Alan Hillier	CSIRO	GC
Forestry			
Forestry: Chair	Ian Ferguson	ILFR	P
Forest Industries: Chair	Peter Vinden	ILFR	C

B = Burnley; C = Creswick; D = Dookie; GC = Gilbert Chandler; L = Longerenong; P = Parkville; VIAS = Victorian Institute of Animal Science, Department of Natural Resources and Environment (DNRE); Trust 1 = Rowden White; Trust 2 = Rowden White; NAB = National Australia Bank

Such an approach was to create the core of Australia's major agricultural education hub. With the merger legislated, action on the plan was to begin in 1998. But resistance to change grew from March 1998, beginning with rural press articles, concerned phone calls and letters. Concocted fictions for questions in Parliament impugning the Dean's personal integrity, abusive phone calls ('we know where you live'), vitriolic libel in letters and outrageous public disloyalty to the Faculty by some ex-VCAH staff followed.[223] The coordinated campaigns exceeded the Faculty's and the University's ability to respond beyond generic factual

statements. It was an unnecessarily debilitating time, fuelled by misinformation and vested interests that was, sooner or later, going to backfire. This eventually occurred after 2004 when the same old tactics were again employed.

Ellen Goddard **Margaret Britz**

Among the new senior posts were the first two women appointed to chairs in the Faculty, Ellen Goddard (Agribusiness) and Margaret Britz (Food Science). Staff duplications arising from the merger were to be addressed on a managed schedule that would balance the operational budget while the duplications and capital cost liabilities of rural campuses required shedding of unproductive units. Falvey, Hickey and Beard worked to rationalize duplication and unproductive activities, while Wood designed new income streams. But smooth implementation was interrupted by a resurgence of the colleges engaging regional politicians and the rural press in misinformation[224] that was only partially mollified by the Dean's and senior staff's tedious visits. One of these visits included the Chancellor Sir Edward Woodward who had been prevailed upon to officiate at Longerenong's graduation ceremony; he and the Dean took the opportunity to meet with local

representatives who had joined voice against the University. Woodward interpreted such reactions as 'outrage, with the country towns affected up in arms, bitter attacks on the university by Members of Parliament, and a deluge of letters to newspapers and directed to the university claiming, in effect, that the university was trying to siphon money off to the city from what had been a profitable rural enterprise'.[225]

Malcolm Hickey **Nigel Wood**

In fact, that Longerenong reaction was par for the course but was a form of Victorian agro-political intervention with which the University and the Chancellor were not familiar. Falvey recalled that after such apparently hostile meetings it was not unusual for a local leader to privately assure him in earthy agricultural style that 'you know we have to say this, but you know us, it's just words' – and it mostly was.[226] The real resistance was within some underperforming rural campuses. It was inevitable that the University would cease subsidizing failing rural campuses and duplicative staff, but the process was to be delayed. Concerned with Spring Street's comfort, the University only supported the Faculty to make some minor changes and then issued an unnecessary public assurance of non-action on the plan. But

as a University history indicates, the 'concessions did not allay the anxieties of some rural campuses that they would be diverted from their mission, anxieties magnified as it became clear that the expenditure needed to remedy a backlog of maintenance would create heavy losses. … The undertaking given casually by Penington's successor, Alan Gilbert, that there would be no closure of rural campuses, no reduction in TAFE programs and no movement of staff made the Dean's position impossible.'[227]

A critical analysis of the Faculty's integration with VCAH to create a total of eight campuses identifies low student demand as a 'stumbling block' from the outset.[228] It was, but Falvey also saw benefits in such a large and diverse Faculty in serving the essence of agricultural science while being able to stave off unwanted interventions from the University and recalcitrant sectors of farming. The overall strategy was forestalled in 1999 by the Vice Chancellor's rejection of the Dean's and Deputy's private advice to close one of the rural campuses. In a meeting immediately following that decision, Falvey emphasized to Gilbert his advice that the decision not to proceed was strategically wrong and would lead to his resignation – it was 'not in the long-term interest of agricultural education or rural communities'.[229] A short standoff brought no action and Falvey confirmed he would resign as Dean under certain conditions; Gilbert acknowledged that 'we should have grasped nettle' and 'next time we address this matter we will not blink'.[230] But this proved not to be the case either. As Woodward later observed, 'I was not surprised when the same problems resurfaced in 2004',[231] and in the interim the University had consistently failed to understand the rural community.

The conditions Falvey set for his departure included continuing as Dean until other key elements of his rationalization could be rendered as irreversible as possible. He left a structure that carried the Faculty forward with Malcolm Hickey as overall Deputy Dean, Val Pollard as Deputy Dean VET, Ellen Goddard as Associate Dean Coursework, David Connor as Associate Dean International and Adrian Egan as Associate Dean Research. There were five departments supplying both higher education and TAFE/VET education, namely: Animal Production headed by Egan; Crop Production headed by Roger Cousens; Resource Management and Horticulture headed by Snow Barlow; Food Science and Agribusiness headed by Margaret Britz, and Forestry headed by Ian Ferguson. This cumbrous structure[232] had assisted and bedded-down the merger and was due for streamlining by staff reductions in 1999 in Falvey's plan.

Officially ending his term in mid 1999, Falvey listed the milestones of his more than four years as Dean at his farewell dinner as:[233] merging ahead of schedule; strategic planning to gain consensus; international and research profiles; incremental industry and government funding for joint chairs; an integrated curriculum; rationalized vocational education, and a corporate approach to management. His later analysis saw these as significant accomplishments that required continued rational management that might be squandered by a lack of University awareness of what was needed to be a world leader in agricultural science.[234] Contrary to one report[235] these initiatives were not reversed although the rationalizing of rural colleges was to wait another six years. Retaining his Chair of Agriculture until 2005, Falvey returned to global and advanced agriculture among other

later roles as Chair of the Board of the International Livestock Research Institute, in some ways mirroring his mentor Tribe's path.

The period of merger was a watershed for the Faculty. The two main providers of agricultural education in the main agricultural State had combined; the weakening La Trobe University course, the private Marcus Oldham College and miscellaneous courses by disparate TAFE colleges were the other minor providers. Rationalization should have occurred decades, perhaps even a century earlier – and it was agriculture's ill fortune that the opportunity arose at a time when the University did not value agricultural science as highly as it did the more currently prestigious faculties. It had earlier sought to close the old Faculty, entered into the merger with VCAH partly to thwart La Trobe and was concerned with enhancing its global image in a manner that undervalued contributions from agricultural science. The Faculty now needed caring leadership through a period of waiting for the inevitable rationalization. As it turned out, rationalizing would be further delayed while the settling leadership came with the longest serving Dean in the University and future Vice Chancellor, Kwong Lee Dow, assuming the Deanship from mid 1999.

Through this period, the other agricultural education providers of note, La Trobe University and Marcus Oldham, had made their own adjustments to the changing environment. It may have been clearer to such outsiders that the demise of the rural colleges, and in particular Dookie, had begun in the 1960s expansion of higher education through the creation of new universities – particularly La Trobe with its agricultural science course. Dookie's stream of capable adventurous city students who had missed out on

a university place now evaporated as they entered La Trobe. The fee-charging Marcus Oldham College, which had thrived within its market maintained a practical diploma rather than a degree course, but by 1997 the intake was only 23. After some shorter-term Heads at Marcus Oldham, Dookie's Deputy Head of Campus Greg Brinsmead was appointed for the period 1998 to 2002, which many saw as a tribute to both Dookie and Marcus Oldham. Meanwhile, La Trobe's course was increasingly serviced by staff from other parts of the university as staff left voluntarily and otherwise and the School ceased to be a management entity.

Kwong Lee Dow occupied the Dean's office from June 1999 to March 2000. His tenure was characterized by building a faculty spirit that would facilitate an incoming Dean and appease some of the more strident voices who had elected to use the Faculty and the University as a vehicle for personal political purposes. Like each Dean from the 1990s, he was confronted by misreporting in the rural press and lively rural meetings. Ever calm in the face of criticism, Lee Dow became the face of the University outside Melbourne, strategically mentioning his Shepparton roots to establish regional authority. During his nine months as Dean, the Faculty finances continued to dominate internal University discussions, and with the management expertise of General Manager Janet Beard and Deputy Dean Malcolm Hickey, the period produced increased understanding across the institution. But having long been Dean of Education through a period of low enrolments and low entrance scores, Lee Dow was alert to the same trend for agricultural, food, forestry and horticulture courses. Without expressing it publically, he became quickly aware that rural campuses and VET/TAFE were the central issues for rationalizing the Faculty; he also knew that the University remained sensitive

to its public image and was unlikely to address these issues quickly. This was to be mandate of the new Dean, the search for whom had intimately involved Lee Dow. The choice was Bob Richardson, whose accomplished dispersal of the nation's wool stockpile was well known. Lee Dow continued in his substantive role of Deputy Vice Chancellor, and later became Vice Chancellor after Alan Gilbert left the University.

Chapter 10

Rationalizing– 2000-06: Richardson, Larkins & Slocombe

Vice Chancellor Alan Gilbert's response to criticism of the University's poor rural presence was to seek a region that La Trobe, Deakin, Monash and Ballarat universities had not claimed. He therefore created the Goulburn Valley University Centre in Shepparton and attempted to locate the new Dean of the Faculty there, with the additional title of Assistant Vice Chancellor Regional. The Faculty of Medicine had also been encouraged to open a facility at the Centre and, for a time, dreams of something larger were entertained.[236] Bob Richardson began as Dean of the Faculty in April 2000, rejecting the Shepparton location, and initially retaining the five Department Faculty structure established in 1997. The University having forestalled the initial rationalisation, the only way the structure could be supported was by higher student numbers. Declining enrolments, finances and the VET/TAFE issue were to define Richardson's tenure.

Bob Richardson was a different type of Dean to Lindsay Falvey; he took pride in being known as a rational economist who had an appetite for detail. He was a practicing farmer, with farmer's hands and demeanour, which won him credibility across rural areas. Having been CEO of Wool International where he salvaged the best outcome possible from the collapsed wool price stabilization scheme, he brought a diligent administrative approach to the Faculty and was soon to advocate the rationalization that had been

thwarted in 1999.[237] His first year went smoothly allowing him to negotiate an extra $1 million from the University to support marketing of courses in the hope of stimulating enrolments. Working well with his senior colleagues in the Dean's office, his hard line on some financial and academic matters occasionally caused them to 'roll their eyes'.[238]

But the trigger that exacerbated other issues was student numbers, which had peaked back in 1997, the year of the merger. By 2000 when Richardson was appointed, numbers were below the combined total of the old Faculty and VCAH in 1994 as the following Table indicates. It was evident that the decline that had begun in VCAH enrolments pre-merger was continuing and that this was part of a general trend in agricultural education around the country and beyond. The continuing high cost base imposed by not allowing staff and campus reductions combined with declining student numbers catalysed Faculty deficits, which should have set the scene for Richardson's rational economic approach.

Total Student Numbers: Faculty & VCAH 1994 to 2000[239]

(1997 merger means that from 1998 figures are combined)

Year	**94**	**95**	**96**	**97**	**98**	**99**	**00**
Pre-merger Faculty	556	604	626	695			
Pre-merger VCAH	1500	1551	1498	1404			
Total	1960	2102	2177	2195	2113	1970	1885

Richardson saw he could restructure the Faculty and balance the budget by reducing staff numbers by 53 between 2001 and 2003. By 2002, Vice Chancellor Gilbert acknowledged that he may have oversold his Goulburn Valley Initiative and raised unrealistic expectations in rural areas, and that Dookie and Burnley higher education courses must change.[240] This was in response to Richardson having

advised 'the eight campus model can never be financially viable'.[241] At the same time, he informed the University that 'the pretence that the Board has a governance role is increasingly embarrassing'. He saw the Board as having an advisory role in interaction with the external environment, which mainly concerned VET/TAFE. But it was to take a change of personalities and public concern in 2004 until the Board engaged in its role.

The professoriate designed by his predecessor to build a new Faculty began to erode with resignations, while a consultative process with industry and regional communities highlighted that none of the campuses reliant on VET/TAFE could be viable without new course offerings supported by a marketing campaign, and reduced costs. Richardson sought to gradually differentiate the functions of campuses so that Longerenong, Glenormiston and McMillan would become VET/TAFE-only campuses while Parkville and Dookie would be solely higher education, with Parkville representing most of the Faculty's research, research-training and professoriate. The other campuses – Burnley, Creswick and Gilbert Chandler – would be maintained as a mix of higher education and VET/TAFE within their specific areas of expertise. He consolidated his first round of changes in the 2002 creation of three Schools; Agriculture & Food Systems, Forestry & Resource Management and Vocational Education & Training in place of the five academic departments. He appointed two Associate Deans, Steve Read and David Chapman; three Heads of Schools, Snow Barlow, Roger Cousens and Val Pollard; six Heads of Campuses, Gavin Drew (Longerenong), Doug Maclean (Glenormiston), Sylvia Vagg (McMillan), Roger Wrigley (Dookie), Leon Bren (Creswick) and Greg Moore (Burnley). He then focussed on cost reductions and means of further staunching the budget

haemorrhage at a pace that some staff considered harsh while Vice Chancellor Gilbert saw it as much too slow.[242]

In this environment, successes were overlooked, including such initiatives as: a new BAnimScMgmt; an upgraded BFoodSc; a GradDip and GradCert in Wine Science, and almost meeting the agreed student:staff ratio of 13.5 on average despite continuing low ratios at Dookie, Gilbert Chandler, Creswick and Burnley. Maintaining that University expectations do 'not reflect the crisis-management environment' in which he was operating, Richardson described his time as mostly occupied by 'problems of farms, forestry, regional political expectations and cultural differences between former University of Melbourne and former VCAH staff'.[243] His success in initial staff reductions and restructuring also resulted in criticism in 360-surveys of his leadership and management in successive years[244] – a factor more easily overlooked for his predecessors but now factored into performance appraisals and sanctions. It was these staff attitudes that were to undermine his strategy when he initiated the next logical step of reducing the accumulating losses in VET/TAFE.

After 2002, it became evident that the University's – Gilbert's – expectations of the Dean were unachievable. While noting that the task 'must sometimes seem like a mission impossible', the Vice Chancellor continued to criticize; lack of progress in increasing student demand and in reducing inefficiencies inherited from the merger, failure to introduce business courses at Dookie, and communication issues.[245] The ensuing exchange eventually led to the Vice Chancellor suggesting in words reminiscent of 1999 that 'this might be the year in which we should grasp that [problem of multiple campuses] nettle'.[246] Richardson outlined an approach of

concentrating VET/TAFE at one site and seeking co-users to cover the operating costs of the campuses losing these courses.[247] He also predicted that the Board, despite its marginal activity, would be an added risk in the expected public reactions.

Notwithstanding his focus on finances, Richardson's private notes questioned the University's short-term financial focus, which he saw as conflicting with its quality objectives – 'how important is it that we get the deficit down further? We really need to be spending $0.5-1.0 million per annum on infrastructure to be quality providers in the future'.[248] He commissioned Craig Pearson to conduct an independent review of the Faculty, which confirmed Faculty management's views.[249] Soon after, Richardson presented a Faculty restructuring proposal to the University's Planning and Budget Committee in which he defined the 'continuing challenges' in 2004 as: 'an inability to grow higher education enrolments and research at Dookie; the continuing legacy of no-research staff in higher education; lack of demand for campus-based full time VET courses at regional campuses; and difficulty in expanding the fee-for-service income of regional campuses sufficiently or to diversify their activities in other ways.' Without specifying detail, the proposal implied that Glenormiston, Longerenong and McMillan would lose programs and staff to Dookie and would seek joint arrangements with local TAFE institutes while some 30 more staff would be shed in 2006.[250] The University Council accepted the proposal.

Advised by Pegasus Communications, Richardson embarked on regional consultations as the first step toward implementing these changes, enjoying some productive meetings with the Southwest TAFE, University of Ballarat

and Gippsland TAFE.[251] Having invested himself in the change process as the University spokesperson, he was infuriated by key VET/TAFE Faculty staff joining public opposition in regional meetings and on radio.[252] His rapport with the farming community dissolved. Farmer groups and regional authorities registered their dissatisfaction with his strategy for the rural campuses, albeit in more restrained terms than the same parties had used in their attacks of five years earlier. However, they were strident and ill-informed in any case, such as the statement of 'absolute disgust and strongest possible objection to the arbitrary actions of the Dean and the Faculty of the University of Melbourne in closing regional agricultural campuses across Victoria'.[253]

Events came to a head near the end of 2004. A paper prepared for the University Council included reference to a preliminary report of PhillipsKPA consultants and justified reconsideration of its decision after receiving Ministerial advice that 'the University would not be allowed to re-direct existing VET programs away from existing regional allocations'.[254] The consultants' draft report was apparently leaked including its summary of the Faculty's proposal 'to progressively transfer from 2005 all full-time TAFE Diplomas and Advanced Diplomas currently offered at Glenormiston, Longerenong, McMillan and Gilbert Chandler campuses to Dookie'.[255]

On the key issues of VET/TAFE and underperforming campuses, Richardson challenged the consultants' conclusion that the dispersed VET/TAFE approach could be viable if the University levied the same 28 percent of higher education income toward overheads rather than only five percent. His final comment was that 'an option of separating VET/TAFE activities out of the Faculty completely should be

developed. If it and its campuses are as successful as [the consultants] now claim then it will be able to stand alone.'[256] He saw such a proposal would separate VET/TAFE into an Institute outside the Faculty for which the Board would 'logically become the Advisory Board'.[257] Then the University Council repeated the 1999 history by reversing its decision. By itself, robust even ill-informed rural criticism was understood by Richardson as part of the cultural environment, but his private correspondence indicates that the devious disloyalty of some Faculty staff combined with the University's recanting of its agreement in the midst of its implementation, affected him personally.

Bob Richardson **Frank Larkins** **Ron Slocombe**

Amidst rising angst, the Dean submitted his resignation from all capacities at the University on November 8, effectively as a protest against its unwillingness to act. The modified consultants' report,[258] submitted after Richardson had resigned, appears to consider the option of the University exiting VET/TAFE and paints a scenario that one feels Richardson might have accepted had the University maintained its resolve. Before the University's change of heart, Richardson had intended to resign in March 2005 with the rationalization process set in place. Vice Chancellor

Kwong Lee Dow had earlier asked him to remain until September 2005, but he could no longer agree to do so.[259] With his resignation, the now anomalous Board convened and 'accepted the view that it was no longer possible for the Dean to manage and lead the Faculty after the reversal of a policy approach he had advocated publically and which had been strongly publically opposed by so many [Faculty] campuses and other staff.'[260] This somewhat disingenuous statement from a disengaged Board that had a history of complicating difficult change environments stimulated Richardson's question on his notes from the meeting, 'what is the future role of the Board?'. Such commentary need not be seen as sour grapes, for his private notes indicate a strong professional approach being maintained until his final day in January 2005.

The Vice Chancellor through 2004 was Kwong Lee Dow who had been Dean for the months between Falvey and Richardson and consequently knew the issues. He lent his authority to correcting the media's favourite jibes of unconsidered 'axing' of staff and 'closing' of campuses. He set the scene for the long-stalled yet inevitable rationalization of the Faculty when with characteristic diplomacy he told the media that, 'using deficit funding to maintain full-service campuses with replicated infrastructure is diverting funds from teaching and research in [the Faculty] and in the University. Over the past five years, the University has contributed $15 million to the [Faculty] budget to cover an annual deficit which has now begun to rise significantly. … while [the Faculty] will remain a multi-site campus we must consider whether it can support a number of separate, replicated full-service campuses in agriculture and related education or just one – as is the case in agriculture-related faculties in other Australian universities.'[261]

One interesting outcome of the furore was a proposal from the Goulburn Ovens Institute of TAFE, now headed by the erstwhile Dookie Head of Campus, Peter Ryan.[262] The proposal was for the creation of the Victorian Agricultural Industries Specialist Centre, which built on both his Institute's capacity and Ryan's own knowledge of the agricultural, food and horticultural VET/TAFE sector. Echoes of VCAH reverberated across parts of the Faculty – if the proposal had gained momentum, history might again have been repeated.

The University Council's decision became interpreted as one of delay rather than abandonment of the rationalizing process, but their credibility within the Faculty was low, and so morale sank further. While consistent with the 1908 Cambridge parody of universities' decision-making described in *Microcosmographia Academica*,[263] the Council's recanting was publically painted as a vindication of rural over urban values in the country campus catchments. Fancies of rural higher education students flocking to rural campuses soon proved false when they appeared as mainly mediocre VET/TAFE applications. Those unfamiliar with universities read different meaning into such rural press quotes from a staff member as, 'it means students interested in agriculture can continue their studies and still be around to work on the family farm'.[264] The time-warp of the colleges persisted.

Around this time, a peripheral debate about agricultural science education around Australia focussed on declining student intakes as a symptom of courses being out of touch. With the market-driven model of higher education having come into vogue such logic appealed to many. Informed spokespersons were dismissed as having vested interests

when they suggested that a major driver was a rise in urban ignorance of the economic and social role of agriculture in Australia. Merging institutions was again suggested, as was a review of the agricultural education sector.[265] Such rhetoric was one source of the strength the University finally found to rationalise its agricultural education. Higher education was the University's strength and VET/TAFE was beyond its competence. This realization was to allow the long-delayed shedding of non-higher education campuses and associated staff, but the 1990s opportunity to shift resources from duplicative and low performing areas to those that would serve future agriculture and agribusiness had been lost.

Part of the direction that Deans had been heading since 1995, which was to be finally accomplished in 2006, acknowledged that VET/TAFE compromised the higher education goals of the Faculty. Richardson resigned stating publically that his 'position had become untenable after the university overruled his plans' and unwittingly echoed Falvey's words of half a decade earlier when he said that the University's decision was 'not in the long-term interest of rural communities'.[266] Richardson had advanced the Faculty towards its recovery and in renaming it the Faculty of Land and Food Resources, he had diluted influences from VCAH and the Board that did not fully appreciate the demands of higher education. Richardson died in 2008, aged 64.[267]

The legacy of Gilbert's 1999 decision, reiterated in 2004, to retain all of the old VCAH campuses and staff had kept the Faculty in financial difficulty despite Richardson's efforts to tightly manage the budget. Upon Richardson's resignation in 2005, Frank Larkins was appointed Dean on the basis of his long experience in working with various Deans as Deputy

Vice Chancellor (Research), a post he continued to hold while Dean. This dual responsibility assisted in the restructuring that was now to take place, at last with the Vice Chancellor's and University Council's endorsement. Larkins came to the Faculty with a brief to reposition the Faculty to be academically sound, regionally acceptable and financially sustainable.[268] Retired Deputy Dean Malcolm Hickey was brought back 'through 2005 as Head of the School of Forest and Ecosystem Science to oversee governance changes at Creswick and to complete the difficult merger of University and State Department of Sustainability and Environment staff and resources at Creswick, Parkville and Heidelberg'.[269] From this and earlier experiences with the State Department reorganisations and mergers, the VCAH and with its merger into the old Faculty and after retirement being asked to sort out merger issues related to Forestry, Hickey discerned a theme. 'Across the campuses, especially the buildings, farms, pilot factory and residences, [there was] a common thread and that was poor due diligence'. This led to 'missed opportunities to identify and therefore cost and budget for these and the associated OH&S issues that were clearly there [beforehand]'. This was not to say that the University did not conduct due diligence, but rather than such investigations were biased to academic rather than business management principles. He noted that such 'information would have modified behaviour on both sides', and presumably effected smoother operational environments for all parties.[270]

Using strategic planning and stakeholder consultations, Larkins developed profiles of regional industries at the same time as confirming the major causes of ongoing deficit budgets. He then evaluated management of each of the Faculty's eight campuses in terms of their capacity to operate within a new budget model that could align the

Faculty with the University's overall plan to deliver world-class outcomes. At this time, the Faculty was still trying to manage the farmlands of Dookie, Longerenong and Glenormiston, and the residential facilities at Creswick, Dookie, Gilbert Chandler, Glenormiston, Longerenong and McMillan. It was physically structured around the main Parkville site, the six ex-VCAH campuses and Creswick, and was organizationally structured into four schools; Agriculture & Food Systems, Resource Management, Forest & Ecosystem Science, and Vocational Education & Training. Courses still ranged from Certificate Level 1 vocational programs and diplomas, through undergraduate degrees to research training degrees, some of which were part of advanced biotechnology research. Such diversity of assets and activities had reduced flexibility to adjust to changed student demand and had led to constant deficits from 1999. In the intervening period, Richardson had managed to reduce annual deficits to $1-2 million by 2005, but accumulated losses across the five years totalled some $15 million, which was significant compared to its 2005 operating budget of $46.4 million.[271]

Larkins consulted widely, on occasion countering local dignitaries' rhetoric about rural campuses serving local families by asking 'and where do you send your children to university?'. Ensuring that affected parties and communities were aware of the need to change, he presented the Vice Chancellor and the University Council with a framework to reposition the Faculty as a financially sustainable and internationally recognized research-based leader in agricultural science. Aware of national competition by virtue of his DVC Research role, he focused the Faculty's resources on higher education and research programs as the means to return the best dividend to industry. This meant returning

the TAFE student hours and associated funding to the State Government to which the University was finally amenable, and with them most remote campuses. Richardson had set up this path in the previous few years by separating the VET/TAFE teaching from higher education, creating a School of Vocational Education and Training, and making three of the rural campuses VET/TAFE only. The path was then paved by the new Vice Chancellor Glyn Davis' public statement that the University 'is not the best-placed provider of vocational education and training in agriculture-related education'; this was refreshing admission uncommon in the ever-positive Melbourne tradition and it took the wind from critics' sails by agreeing with one of their principal arguments.[272] The Faculty then planned, with the State Government, the handover of facilities and courses to regional TAFE Institutes to occur over the ensuing two years to allow enrolled students to complete their courses and for staff employment entitlements to be managed appropriately. The campuses at Longerenong, Glenormiston, Gilbert Chandler and McMillan were transferred back to the State for ongoing management while Burnley, Creswick and Dookie were retained and integrated as far as possible with Parkville's higher education and research programs.

Having restructured the Faculty in a manner that should not have been interrupted some six years earlier, Larkins had prepared its major elements for handover to a new Dean in whose appointment he was intimately engaged.[273] In the interim, a respected Chair from the Faculty of Veterinary Science, Ron Slocombe, assumed the role as Dean, inadvertently foreshadowing a future iteration of the Faculty that was to occur some seven years later.

By 2005 the Faculty had weathered turmoil almost continually and been frustrated in delays in action for what was seen as inevitable by those concerned. Research continued apace, higher education teaching ranked well, and key staff advanced in their careers. Mohan Singh had been promoted to Professor foreshadowing recognition of some other key leaders to be similarly recognized soon later. Ron Slocombe came to this productive yet uncoordinated milieu as Acting Dean of what was now a three school Faculty that had as Heads Greg Moore for Horticulture at Burnley, Rod Keenan for Forestry at Creswick, and Snow Barlow for Agriculture, Parkville and Dookie. With 20 years' experience in the University and a respect for its systems tempered by a fair approach, Slocombe was to oversee the Faculty's final exit from VET/TAFE with its financial challenges yet to be fully resolved. He defined his 12 months in the role as characterized by three main activities; celebration of the Faculty's Centenary, reorienting the Faculty's courses to the imminent Melbourne Model, and completing the search for a new Dean. The Faculty Centenary year – 2005 – was celebrated in 2006 after considerable preparation, confirming alumni pride in the Faculty and yielding the photograph of seven Deans of the Faculty attending the gala dinner at Ormond college.

Beginning with visits to the eight campuses, Slocombe assured current students that they would not be disadvantaged by the University ceasing VET/TAFE activities, and experienced a level of resentment somewhat subdued from earlier times although still pronounced at Longerenong and McMillan. He recognized that working with the Heads of Schools to consolidate the Faculty academic programs was an urgent need in order to ready them for the Melbourne Model, which allowed only a limited

number of undergraduate degrees comprising some key breadth subjects. It was seen that it was imperative for the Faculty to be appropriately represented in the design and delivery of breadth subjects in the relevant areas of science, environment, engineering, commerce and humanities.

Faculty Deans at the Centenary, L-R: Ron Slocombe, Adrian Egan, Lindsay Falvey, Ian Ferguson, Bob Richardson, Frank Larkins, Doug Parbery, Robert White, Norman Tulloh

At the main Parkville campus, Slocombe took the view that undergraduate degree level agricultural subjects were, or should be, similar to those at Dookie. Some Faculty colleagues differed on the basis that their research and higher-level teaching activities distinguished them from Dookie's practical course, staff and students. Both perspectives were valid within the dynamic context of the 'need for revenue, renovation and the reduction of subjects and courses' to suit the Melbourne Model. Nevertheless, some science-based subjects had persistent low student assessment scores. On the other hand, the MAgbus had

blossomed into a successful online format that was 'well subscribed, financially viable and one of the first online programs at the University'.[274] Food Science was identified as having potential in the new Model but was hindered by limited numbers of senior staff, excessive teaching loads, low enrolments and low entrance requirements including IELTS. Said Ajlouni's stamina through the period was especially valued, as was later acknowledged. The Parkville facilities, which had been renovated less than a decade earlier during the merger required re-modernizing, and competition for laboratory spaces, greenhouses and equipment was ongoing. Deli Chen's work on Green House Gases measurement and abatement, and David Chapman's in dairying continued to attract international interest to Parkville, as did the molecular work of Prem Bhalla who was now made Professor. The Faculty was strengthened by the appointments of Frank Dunshea to the Chair of Agriculture in 2006 and Nigel Stork to the Chair of Ecosystems in 2007 while the Dean's office which had for a decade been managed by Janet Beard was to feel her loss when she transferred to the central University.

Attempts to increase degree student enrolments at Dookie 'had spawned enormous subject options and kept entrance standards at near TAFE levels'.[275] Barlow's work on grapes and wines proved attractive to Dookie students in renovated lecture rooms but other subject areas were static or in decline, and spartan student accommodation was unattractive to many prospective students. Attempts to widen interest in Dookie by opening the winery to tourists did not fulfil its expected potential, not the least because of the stench of the Dookie piggery, which as part of rectifying Faculty finances was under contract to external management. The piggery was symptomatic of Dookie's long

legacy as a farming school, which had delayed reorientation of its dairy, sheep and cropping enterprises while undervaluing the heritage and indigenous components of its nature reserve.

Janet Beard

Prem Bhalla

Attempts to interest other faculties in Dookie were unfruitful despite bringing the University senior executive (VC, DVCs, Provost, Deans and senior faculty administrators) to the campus, which only served to reinforce its remoteness from the main Parkville campus. Although Slocombe explored the possibility of veterinary students gaining experience in pre-veterinary animal science at Dookie, the Faculty of Veterinary Science did not consider Dookie for this purpose until several years later. By now the University reaction was predictable; exit from VET/TAFE and the requirements of the Melbourne Model to cancel low enrolment subjects and consolidate degrees did not warrant further University expenditure on improved accommodation at Dookie. The student accommodation management group YMCA expressed some interest in taking on the role, but nothing eventuated. The academic outcome at this stage was that both the Dookie BAgr and the Parkville BAgrSc were retained with the former supported by a Dookie

Scholarships Program while creative ways to link the two degrees were developed within the complex cross-crediting and costing options available at the time.

At Burnley, national strengths in horticulture for council parks and gardens relied on VET/TAFE programs while higher education enrolments remained static despite changes in course structures; post graduate numbers remained low. A dialogue with the Department of Botany in the Faculty of Science to encourage their involvement at Burnley appeared to lead nowhere at the time, but was to do so later. In contrast to its unsatisfactory higher education facilities and performance, the Burnley gardens 'were maintained superbly' and were the focus of 'the strong local community'. Staff fears that the University might exit Burnley as it had three rural campuses were lessened by Vice Chancellor Davis' assurance that 'Burnley would remain under the University umbrella'. Thus was sown a seed that would emerge to daylight eight years later when Burnley campus was reallocated to the Faculty of Science.

The Creswick campus was to share that same destiny of reallocation. Perhaps an added attraction of the Creswick campus was the fact that at this time in 2007, its infrastructure was well maintained and it housed a respected research culture in wood science that had been built up by Peter Vinden. This was all in addition to inputs to the BForSc on which the Melbourne model was now expected to exert further downward pressure on already low enrolments. The School was to move toward forest ecosystem management, which embraced modelling of bushfire behaviour that became important following the severe 2008 bushfires. Such research outputs 'represented one of the most troubling issues for … young and mid-career

scientists who engaged in applied research for which there was very limited peer comparisons available, who [because they] published technical notes rather than peer reviewed manuscripts, were disadvantaged by the promotions system in the University at the time. Clinically appointed staff in [Veterinary Science] shared the same fate.'[276]

Appalled at substandard submissions emanating from the Faculty to University committees and largely working alone, Slocombe instituted quality control measures and encouraged Faculty staff to play a role in wider University affairs – a move that he felt 'radically improved the status of the Faculty within the University'. Coming from another faculty, he was less familiar with the disillusionment that had resulted from alternating University intransigence and interference in the Faculty. The Faculty was now positioned to where it could have been almost a decade earlier. But the vision of building on a new professoriate in conjunction with the State Department, CSIRO and the private sector had been fractured. Nevertheless, it was a major Australian provider of agricultural education, as befitted a leading University located in the most agriculturally intensive State. Other local providers had run down their offerings significantly, particularly La Trobe University. The VET/TAFE providers were now of less concern to the Faculty, even where they offered degree courses. Marcus Oldham College joined the trend to offer bachelor and master degrees through its association with Deakin University, gaining substantial capital from land sales. Simon Livingstone was Marcus Oldham Principal in this period of change from 2002,[277] but Faculty contact was minimal, the major contact possibly being retirees Falvey and Hickey chairing higher education panels for the Victorian Registration and Qualifications Authority (VRQA), the agency responsible for accrediting

higher education for such non-self-accrediting institutions. Some TAFE Institutes similarly introduced degree courses, such as Northern Metropolitan which Robert White assessed for VRQA.

Throughout his tenure, the third major activity defined by Slocombe was involvement, with Larkins his predecessor, in the intensive central University process of finding and appointing a new Dean; Rick Roush was the preferred candidate and he took up his role in 2007. Slocombe gratefully returned to his research and teaching in the Faculty of Veterinary Science, appreciated as having been an energetic and fair advocate within the Faculty.

A Diverse Faculty – 2007-14: Roush

Roush assumed the Dean's Chair in 2007 to oversee a period of calm development of the Faculty as an integral part of the Melbourne Model, which defined the operational environment. With that change had come increased centralization of authority across the University, albeit varying with compatibility of personalities. Many who had known the Faculty over previous decades hoped this could be a return to an earlier approach after the adventure of taking over VCAH. It is therefore worth a brief reconsideration of that intervening period to provide the context for the longest serving Dean of the Faculty since Forster in the 1960s.

In 1997, the merged Faculty incorporating VCAH had been launched amidst fanfare with the Dean drawing a metaphor from a personal story. 'In my younger days I rounded up wild Northern Territory cattle on horseback. A friend from that era asked me whether the Faculty had now reached the situation with this merger that one has when the cattle are finally herded into the gate corner of a square-mile bush paddock. Once the gate is opened the work all begins again as cattle scatter. We have the cattle at the gate, the largest agglomeration of academics related to agriculture ever seen in Australia. But unlike the novice ringer wondering which way the cattle will go next, we have a specific plan.'[278] But plans of that and the next long-term Dean were thwarted when the gate towards which all were being herded was locked by those who had assured that it would be open. Rather than blame the herder or the gatekeepers, it is fruitful

to consider the overview of an informed observer across the period, who elicited five specific issues.[279]

The five confounding issues were: Faculty structure; curriculum change; the University's ignorance of VET/TAFE; financial deficit, and underestimation of the integration task. Faculty structure had been based on a matrix to accommodate the merger that was to be changed after a year or so, but that plan to change was scuttled when the gate of rationalization was locked. This was a difficult operational environment for new Professorial appointments, and allowed sometimes conflicting actions by remote campuses. Curriculum change to three-year undergraduate courses were independent and distant 'from the TAFE/VET-focussed programs at the heart of many regional campuses', which were seen as unrelated to high-quality higher education. This reflected the University's 'little real understanding of regional agricultural campuses' or of VET/TAFE and exacerbated divisions in opinion. Compounding these irritations was the Vice Chancellor's decision to embargo the Faculty's planned reduction of staff and campuses while schizophrenically holding accumulating deficits to the Faculty's account during a phase when agricultural enrolments across Australia were in decline. Finances, VET/TAFE and rural campuses vexed Deans, and in an insightful moment in the 2000 interregnum the University questioned whether the Dean's task was possible given conflicting University objectives; the same comment of the 'impossible task' was acknowledged in appraisals of the next Dean.

By the time the matter was finally resolved, the gains of joint professorial posts to lead the key fields in which the Faculty could build national and strategic international leadership

had been lost. So while the issues were finally acted on in a manner apparently consistent with the intent of the long-term Deans, mainly by short-term Deans with specific briefs to shed VET/TAFE and rural campuses, opportunities for agricultural leadership were now less evident. The task was more to prepare for Roush's arrival at a time when the University's new Melbourne Model was being implemented.

The Melbourne Model required only six undergraduate degrees across the University each including broadening subjects, which allowed the Faculty to argue for continuation of a specific BAgr degree at Dookie since it could not reasonably fit into the Model. The Dookie BAgr students were to spend their first year at Parkville for foundation subjects, and having had a taste of the University and the city, they preferred to spend future years there – thus allowing the Faculty to offer a degree outside the Melbourne Model. But it was not an agricultural science degree in the historic sense of the Faculty.

In the midst of grappling with the Dookie degree, Snow Barlow who had initially been appointed to assist its integration with the Faculty, recalls 'driving into Dookie on a brilliant day and being immediately aware of the utes, big hats and the usual dogs and having the thought "is this the transformative higher education experience that Melbourne University is seeking to provide?" All I could see was that we were taking kids from conservative rural communities and re-enforcing those values without exposing them to the wider world.' This meant that, while the move of the first year of the degree to Parkville was agreed on the grounds of teaching resources in the basic sciences, 'I always had the idea that it could be more than that, and when the students expressed the view that they would prefer to stay at

Parkville I was more than happy to agree.'[280] Far from being pejorative about hats – Barlow himself came from a big hat rural background – this was a comment on divergence between traditional practices and the continual evolution of agricultural production systems under the influence of science and innovation.


Snow Barlow


Mohan Singh


Deli Chen

Roush was initially appointed Dean for three years and extended for five years in 2011,[281] resigning before the end of that term in 2014. He had come from an industry-linked academic career in the USA and Australia, most recently having been CEO of the Australian CRC for Weed Management and Director of the State-wide Integrated Pest Management Program of the University of California. A new and experienced General Manager Teresa Tjia had been in place from the year before his arrival. With his appointment, the Faculty was again renamed, this time to become the Melbourne School of Land and Environment. Geography staff were transferred to the Faculty and a three department structure was instituted with the Departments; Agriculture & Food Systems, Forest & Ecosystem Science, and Resource Management & Geography. The name and the acquisition of Geography were ostensibly portrayed as representing the Faculty's role in the Melbourne Model in which it would

contribute much of the BEnv. The other degrees of the Faculty – BFoodSc, BAgrSc, BNatResMgt and BAnimSc – were subsumed into the new BSc within the Faculty of Science with the Faculty continuing to provide major inputs into the Food, Agriculture and Animal Science majors within the BSc among some 32 majors. Whether intended or not, the incorporation of the historic trademark of the Faculty – the BAgrSc (which had in fact been reduced to a three-year course some 15 years earlier without much outcry) into the Bachelor of Science signalled to staff and friends of the Faculty that the University was downgrading agricultural science.

Under this new Melbourne Model, the Faculty gained much needed first- and second-year students through developing a series of popular Breadth Subjects taught in conjunction with other faculties. The food and wine sequences included 'Food for a Healthy Planet' and 'Australia in the Wine World' and soon attracted 1,000 students each across their three years.

The Faculty retained the Dookie BAgr degree on the grounds of distance from the main campus and when this ultimately moved to Parkville it became the anchor that allowed the Faculty to survive as a faculty of agriculture. The Faculty continued to bill itself as Australia's largest provider of agricultural education[282] and Dookie as the largest regional-based provider,[283] but such claims now lacked substance; as the following Table indicates, the University of Queensland appears to have been the largest provider since the Faculty shed VET/TAFE, and Charles Sturt was certainly a much larger regional provider than Dookie.

Universities in Agricultural & Environmental Education[284]

	2004 EFTSL	2004 Rank	2009 EFTSL	2009 Rank
Queensland	1636	1	1278	1
Melbourne	945	2	1067	2
Charles Sturt	609	3	717	3
Sydney	545	4	343	8
Adelaide	483	5	454	5
Curtin	405	6	247	12
Tasmania	403	7	484	4
ANU	387	8	388	6
La Trobe	329	9	352	7
New England	327	10	318	9
Western Sydney	295	11	222	13
Murdoch	233	12	315	10
Western Australia	185	13	308	11

In a submission to a Victorian government enquiry into agricultural education and training,[285] the Faculty now stated its mission as, 'sustaining our community's land, natural resources and environment' – agriculture was the primary subset within that rubric. At the time, the Faculty ranked fourth in terms of research in the University with research grants totalling $20.5m in 2009 and the second highest in terms of income per staff member – Deli Chen, Mohan Singh and Frank Dunshea were major players – yet the Faculty's undergraduate popularity continued to suffer from negative community perceptions of agriculture. Managing declining demand had resulted in reduced staff numbers and increased workloads, and had stimulated proposals for a Regional Partnerships Facilitation Fund and a research, education and technology partnership labelled Dookie 21. Dookie 21 sought regional investments exceeding $40 million,[286] but ultimately raised little thereby again

calling into question the University's understanding of the rural and agricultural communities.

Prior to Roush's arrival – in 2004-5 – Head of School Barlow had investigated means of enhancing the research profile of Dookie with the support of local industry. As this was in the depths of the millennium drought, water was determined to be an obvious pathway. Consequently, Barlow joined forces with the University's newly appointed Director of the Water Research Institute, John Langford, and was successful in obtaining a $1.5million grant from the State Science and Technology Initiative for irrigation research at Dookie. This provided a basis for convincing Vice Chancellor Glynn Davis, who had earlier expressed doubt about low entry-scoring agricultural students at Dookie, that Dookie was a valuable water research site unique among the major Australian universities. A further $20million was then secured from the National Water Commission and administered through the Faculty and when implemented jointly with the Faculty of Engineering studies were expanded to hydrology, agriculture and biodiversity. The Dookie 21 initiative that Roush thus inherited was intended to build on this research platform. However, 'the University supported this initiative with the full strength of its business planning! – the kiss of death.'[287] New to the machinations of the University, Roush was unaware that the business planning process had sidelined Barlow and Langford, who had the contacts to leverage funds, and so Dookie 21 became another furphy. In the meantime, Deli Chen broke another ethnic glass ceiling to become the University's first Chinese-born full Professor, and his soils group grew to become one of the largest research income earners in the University. Chen together with ARC Fellow Mohan Singh and Prem Bhalla were now Faculty leaders – with their origins in Asia representing a

belated part of the 1997 Dean's plan and as earlier foreshadowed in the Greenland Report.

Rick Roush

Teresa Tjia

A comprehensive five-year Faculty plan outlined the aspirations of the Faculty from 2011 to 2015, mainly indicating conformity with the University's plan and its focus on high profile research and rankings. The plan described Dookie 21: 'with modern infrastructure and equipment so that it can both inspire and train students and practitioners of all ages' in a 'world class interdisciplinary centre of excellence for research and development of systems and technologies towards efficient and climate resilient farming (livestock, horticulture, and broad acreage) in support of sustainable Australian and world food production'.[288] Such an aspiration required more substantial and ongoing funding than the University realized or would provide. Perhaps it was more a need to conform with the University's rhetoric that led to the Faculty plan's claim that 'Dookie represents a world-class research and experimental farm',[289] when it might more aptly have been described as under-resourced, understaffed and unfortunately-located. To many concerned with agricultural science, persistence

with the Dookie site under such conditions was inconsistent with claims of excellence in agricultural education.

In terms of student income, the Faculty benefitted from the Dookie BAgr students' taste for Parkville that kept them there for two years in a degree unconstrained by the Melbourne Model. This was through 2004-2009 when Australian domestic higher education completions increased by 8.3 percent compared to agricultural completions declining by 15 per cent.[290] The Faculty followed national agricultural trends until 2010 when enrolments exceeded teaching targets by 58 students and the Faculty began its elimination of subjects with enrolments of less than 15 students. Masters degrees were offered in: Agribusiness; Agriculture; Animal Science; Food Science; Forest Ecosystem Science; Urban Horticulture, and Wine Technology and Viticulture. The Faculty also administered the Master of Environment. Graduate Certificate offerings were: River Health; Garden Design, and Climate Change for Primary Industries.[291] Faculty publications for 2010 were 133 percent of 2009 through increased collaborative research, which incidentally meant that the key weighted indicator did not change significantly. With 90 percent of academic and research staff actively engaged in research, the Faculty exceeded University targets, assisted greatly by the absence of VET/TAFE obligations. However, as a result of the rationalization actions prior to Roush's appointment, senior leadership positions were thinly spread across the Faculty's three departments and four campuses; specific gaps such as in Pasture Science, Production Horticulture and Food Security were identified. Collaborative arrangements involving the Faculty included: internationally, the Animal Science Welfare Centre, and domestically; the Primary Industries Climate Challenges Centre, the Climate Change

Research Strategy for Primary Industries, the Primary Industries Adaptation Research Network of the National Climate Change Adaptation Research Facility, the Social, Economic and Institutional Dimensions Network, the Victorian Centre for Climate Change Adaptation Research, and the Melbourne Sustainable Society Institute.[292]

Jeff Topp, the longest serving professional of the various iterations of the Faculty managed the Creswick centenary, which was celebrated in 2010 as a major forestry alumni event attracting even greater numbers than the 125 year celebrations of Dookie in 2011. Dookie alumni in attendance included the Shadow Minister for Finance, Andrew Robb, and 'Australian Legend' Emeritus Professor Nancy Millis, who as a BAgrSc student was one of the first women to study at Dookie.

Jeff Topp

Nancy Millis[293]

The Shadow Minister's speech highlighted the major contribution to agriculture that Dookie had made in the past – a timely reminder that the times and its role had changed. Its heyday was further celebrated through an engaging and under-patronized exhibition at the Baillieu Library.[294] Some now see those celebrations as portents of a disappearing era

in Australian agricultural education, although that was not yet in the minds of most participants. It may well have been in the back of the mind of the Chair of Pasture Science, David Chapman, who was a key chair for a Faculty in a major world pasture-based dairy region, and from which he resigned to return to New Zealand in 2010.[295]

By 2011, the Faculty's 'diverse disciplines' were those of 'land and environment' rather than agriculture per se, and it sought to address 'issues of climate change, food security, water management, sustainable use of resources, changes in urban ecosystems and other problems that challenge government decision-makers, industry leaders, and urban and rural communities'. It was a significant provider of undergraduate Breadth Subjects in the New Generation Degrees introduced with the Melbourne Model. On the other hand, it administered only two undergraduate degrees itself – BAgr and the Associate Degree in Environmental Horticulture – both oriented to industry and with entry pathways for disadvantaged and mature-age students. Graduate teaching included courses linked to industry, intensive residentials, online, block-mode, and semester-long subjects. The research training program through PhD and MPhil was also offered at all campuses.[296]

Having lost the key opportunity to enthuse first year students, enrolments in agricultural subjects fell below those experienced before the Melbourne Model was introduced. Furthermore, Honours enrolments fell from 40 EFTSL in 2010 to 19 in 2011 as a result of the reduced enrolments in majors, particularly Animal Science and Food Science. As Roush's Faculty Plan noted, 'lack of lecturing opportunities to large-enrolment undergraduate subjects has hampered our contact with the market and negatively

affected our pipeline into Honours. This will have flow-on impacts for our PhD, MPhil and graduate coursework programs'. Graduate enrolments fell in 2011 as a result of University errors in the international online information. [297]

Market research reports[298,299] prompted the Faculty to turn to executive and industry courses, offshore demand and lower-cost modes of delivery. The University focus on cost-efficient courses that led to cancellation of low enrolment programs was accompanied by improved cost monitoring of individual subjects. Staff were required to undertake ever more administrative tasks in a managerial environment, although sporadic use of senior honorary staff assisted to widen international and industry contacts. At the same time, the Old Agriculture reception area was renovated to create student lounges, wireless study spaces and flexible teaching spaces – at last opening the Faculty to the System Garden with views of the remnant tower of McCoy's conservatory, as in the following image.

The Old Agriculture lobby opened to the System Garden[300]

Priority research areas were identified as: Bushfire Behaviour and Management, Environmental Change and Development, Resource Economics, and Water Conservation in Cropping. This was within the strong research areas of: Animal Science, including behaviour and welfare; Ecology, ecophysiology and ecosystem function; Food Science and

product development; Forest Production and sustainable forest management; Geography, including physical, cultural, and human geography; Land and Food systems management, innovation and change; Plant Biology, production, and biotechnology; and Water, nutrients and greenhouse effects in land systems.[301]

The Faculty's improvement in terms of University indicators across some five years to 2011 relied on the General Manager Teresa Tjia working closely with the Dean. Seeing the task as one of rebuilding the remaining campuses and Parkville in physical and financial terms, the Faculty General Manager worked on the budget deficit inherited from now forgotten University intransigence that had, after so many years, morphed into a criticism of the Faculty being a poor performer. Across these years, both the deficit and the image were corrected through; a $6 million improvement in annual operations matched by $10 million in new capital projects, $12 million for regional campus grants and a 100 percent increase in income from professional and industry programs. Together with Tija focusing on Faculty administration and its relationship to the wider University, Roush's task was assisted by the Faculty's healthy research income and teaching of breadth subjects to large multi-faculty classes. 'This was achieved in ever-changing contradictory environments and against a back-drop of regional politics'[302] and led to a University commendation of the Faculty's administrative leadership.[303] The combination of internal reputational and budgetary improvement aimed to build 'staff and stakeholder confidence, and ensured continuation of quality education, research and industry partnership for food, land and water security'[304] – albeit on a smaller scale than was once envisaged, mixed as it now was with a diversity of other fields and broadly-based teaching.

By 2011, the Faculty was offering such undergraduate education as a three-year sequence 'Food for a Healthy Planet' for 300-400 students each year, majors in the BSc, an Associate Degree in Environmental Horticulture and the BAgr courses. Graduate coursework covered Agricultural Science, Animal Science, Agribusiness, Food Science, Wine and Viticulture, Forest Ecosystem Science and Urban Horticulture. The BAgr was now based on two years at Parkville followed by the third at Dookie and targeted a broader spread of entrance scores; it was also intended to be a pathway into graduate studies in Veterinary Science. The degree was not that described by Wadham and successors in earlier chapters. As the custodian of the Office for Environmental Programs, the Faculty administered the Master of Environment and taught into its programs.[305] The Office later moved with Geography's exit from the Faculty to continue as a successful multi-faculty delivery facility.

Perhaps as a result of having spread itself across a wider field at this time, the Faculty was missing a major play in Victorian agricultural research. For a competitive institution like the University, it had always been imperative to keep a watchful eye on collaborators, especially the State Department. But with the Faculty's eye introverted through these years it missed the Department's need to seek a home for its some of its senior scientists. Consequently, that home was found not at Melbourne but at La Trobe University even as that university's agricultural education shrank below critical mass. Established with a budget of some $288 million in 2012 to house some 250 agricultural scientists under a recognized leader, the joint centre – Agribio – appeared to be critical to future agricultural research linked to education.[306] Although this may be seen as an lapse in the University's diligence, its impact was to be positive for

agricultural education and research. Collaborative research between the Faculty and the State Department had long been well established. At least one joint Professorial appointment with the Faculty continuing since the grand vision of the mid-1990s found himself housed at both Melbourne and La Trobe.[307] The fillip to La Trobe assisted the sector to maintain a wide front that was to prove valuable when appreciation of agricultural education later rose. With the State Department continuing to be a major player in research beyond Agribio and with Melbourne and La Trobe's presence, the Victorian sector again became conspicuously dynamic. But at the time of its creation, the Faculty's primary concern was its precarious funding base from undergraduate education.

Undergraduate student demand continued to soften, attracting the usual angst within the agricultural academy and pressure from market-driven purists in higher education. Market failure was clearly indicated by studies that showed an increasing Australia-wide deficiency of graduates compared to industry demand,[308] while estimates of student demand for agriculture, horticulture/viticulture and forestry in Victoria were only 83, 36, and 21.[309] It was clear that industry demand needed to be segmented, an approach that gave the Faculty yet another idea to utilize Dookie,[310] which was more suited to practical training than scientific education. Postgraduate completions in agriculture rose by more than 20 percent through the period with international student demand. For the Faculty, as the major provider in the most agricultural intensive part of the country and without a subsidized quota managed according to national interests as in some countries, reliance on an urban-market-driven model to maintain a constant cadre of highly trained researchers and broadly educated

agricultural scientists was inadequate. Those involved in the progressive components of the agricultural sector were concerned that the Faculty was unable to meet its social and educational obligations.

By 2012 the Faculty was in surplus by $2.6m and the deficit of $5.5m accumulated from University actions was written off. Roush was lauded among University management, particularly by those who recalled decades of angst over dubious figures. Yet the remote campuses remained a financial drain, the additional 'easily identified annual costs' being $0.75 million in rent, $2 million in service charges, the cost of 10 additional professional staff, transport costs between campuses and unquantified inefficiencies of lost time through travel and long distance communication. Apart from the cumbersome external campuses of Burnley, Creswick and Dookie, the Faculty's presence at Parkville was fractured across the historic Agriculture precinct, Bouverie Street and the Alice Hoy building. This sprawl spawned a Faculty proposal that 'the University and the [Faculty] would gain from a purpose built [Faculty] hub at Parkville' that 'would allow the co-location of staff from different disciplines to engage in greater collaboration'.[311] This was only to be considered in 2014 as part of the next iteration of Faculty restructuring in conjunction with Veterinary Science, for implementation in 2017.

While its teaching load into the BEnv and the BSc was significant, the degrees themselves were biased towards built environments and medicine respectively. Agricultural science had all but disappeared. The Faculty was now 'a key provider to the University's undergraduate teaching programs, offering popular Breadth subjects in … what might be considered non-traditional cohorts for [the

Faculty's] specialisations'. Meanwhile Agricultural Science continued to languish. A Diploma of General Studies was developed jointly with TAFE institutions to encourage rural school leavers into tertiary study. But the main fillip for general agricultural study was to be a general rise in demand across the nation, leading to BAgr enrolments being 42 percent higher in 2012 than 2010 with a new major in Animal Production attracting 50 students. Perhaps the most original shift in demand was a continuing rise in international students taking the BAgr – from 12 in 2010 to 29 in 2012.[312]

Research continued to expand with: an ARC Industry Transformation Hub supported by Kraft Foods under the direction of Frank Dunshea, which brought an initial $5 million to the Faculty; Department of Agriculture, Fisheries and Forestry grants that totalled more than $9 million; and Deli Chen, Mohan Singh and Prem Bhalla sustaining their large grants. New researchers underwritten by a $1.5 million University grant spread over three years assisted development of a critical mass in the area of food and nutrition. International research partnerships focused on Asia through the Australian Centre for International Agricultural Research, collaborations with China and India and other initiatives.[313] Barlow, who had originally been appointed to the Chair of Production Horticulture and later redesignated as Professor of Horticulture and Viticulture, resigned in 2013.[314]

Through this period, the University embarked on a major fund-raising drive to which Roush devoted much effort, particularly for campaign activities of potential benefit to the Faculty. This reduced the chances for opportunistic management within strategic planning. Thus the re-creation

of a Deputy Dean position was prompted, which had not been filled since Malcolm Hickey's retirement in 2002. The University was continuing to change as it dexterously positioned itself above others in Australia, dragging the Faculty along in its wake. One part of the changes was creation of a pathway for promotion to Professorial level in addition to the traditional system of waiting for a Chair to be vacated, or otherwise being appointed as Professorial Fellows. Now all were of similar status for most purposes, and in this period new Professors included; Robyn Warner (Meat Science), Jim He (Soil Science) and Paul Taylor (Plant Pathology).

In 2013, the Provost commissioned an external review after 'biological sciences was assessed as having only average performance on the world standard, placing it disappointingly lower than its peers'.[315] The review considered biological sciences across the faculties of engineering, medicine, science, veterinary science and the Faculty, which was at the time constituted of three departments: Agriculture & Food Systems, Resource Management & Geography, and Forest & Ecosystem Science. The University considered the review's 23 recommendations in October and accepted that: 'the Faculty of Veterinary Science remain as a stand-alone entity'; 'the current development of a business case and architectural studies to improve teaching facilities for the Faculty of Veterinary Science be prosecuted with a sense of urgency'; 'the biomedical science departments … remain within the [medical] faculty'. Some related recommendations were taken under consideration, and those specific to Science held over until a new Dean of Science assumed the role. Noting overlap, the review also highlighted the demarcation between the biological sciences represented in Science and

the Faculty, which led to the observation that there was 'an opportunity to capitalize on the strengths and common interests of the two faculties. Bringing the two together could help in reducing excessive teaching loads, promote a rationalisation of subjects and increase the opportunities for collaborative research'. The consequent recommendation was that: 'the three departments that constitute [the Faculty] and associated research centres become part of the Faculty of Science' and 'retain their departmental status'.[316]

The review of biological sciences had focussed mainly on issues within Science and the suggestion of a merger of the Faculty with Science came as a surprise to all concerned. Having received submissions from some 26 sources including the Faculty, the suggestion appears to have relied on an argument of teaching and research efficiencies. Accordingly, the University consulted with affected parties and weighed the additional issues raised.[317] Against such benefits as new opportunities in environmental, forestry and ecosystem science and geography, concerns were expressed about the Faculty being 'sucked into the inward-looking focus' of Science where it could 'lose the advantage of its current outward focus and research links'. Alternatives such as promoting synergies without organisational restructuring or creating a School of Life Sciences and a School of the Environment were proposed. The views of external partners and stakeholders repeated those heard over the past three decades of 'withdrawing support for the regions' that would disenfranchise rural communities and be seen 'as another nail in the coffin' that could endanger endowments and relations with the State Department of Agriculture. Geography, which had come into the Faculty as an orphan was pleased to be rehoused and quickly shed associations with 'Resource Management'; this raised the

need for the social sciences of agriculture to be properly protected in any amalgamation of the Faculty's diverse disciplines into Science.

To the University's credit it noted the idea of an independent agricultural institute, and commentary about the 'synergies and efficiencies possible in bringing large numbers of animal scientists together with veterinary science', while noting the suggestion that 'agriculture should be kept separate and perhaps merge with Veterinary Science', [318] an option that the Dean of Veterinary Science was willing to entertain, and eventually shepherd.[319] From among such options, the agriculturally-oriented part of the Faculty merging with Veterinary Science emerged as practical, and staff were offered the choice to stay or move to Science. An informed reader of these documents must be struck by the dilution of agriculture that had occurred within the Faculty over the recent years in favour of environmentally oriented terminology. One senior observer noted that 'only one of the three departments of the Faculty has been combined with Vet Science. The other two are in an expanded Science faculty, though slightly modified, rather than being directly and simply transposed'.[320] This clear reduction in the role of agricultural science within the Faculty by this time was one of the reasons that many old hands felt that the tail of unrelated disciplines was wagging the agricultural dog. It also explains why those with an historical interest in agricultural science see the real Faculty as having merged with the veterinarians to create the Faculty of Veterinary and Agricultural Sciences. As such, the merger might be claimed to be a resurgence or strengthening of agricultural science within the University. It was certainly accepted in the rural communities with unprecedented yet still muted acclaim.

The public announcement of the merger of 'agriculture with the Faculty of Veterinary Science' was supported by the usual rhetoric that 'these changes will only strengthen our research and teaching programs'. Roush had accepted the merger in preference to that with Science in the knowledge that the Faculty's surpluses and coveted Royal Parade site could enhance both Veterinary Science and Agricultural Science. But with two of the Faculty's three departments having gone to Science, the cost of having diversified out of the agricultural sciences now came home to roost. Despite consultation, the merger announcements came as a surprise to some Faculty staff; the Dean himself was to be surprised once the implications of the merger became clear. The Faculty was renamed once again to become the Faculty of Veterinary and Agricultural Sciences (FVAS), retaining the Dookie campus and the BAgr, which was to double its commencing intake to 200.[321]

The University Executive approved formation of FVAS in March 2014 with the erstwhile Dean of Veterinary Science Ken Hinchcliff assuming the Faculty's Deanship; the new name of the Faculty was to take effect from 1 July 2014. The University paid tribute to Roush's seven years, and he in turn acknowledged the dedicated Faculty staff whom he assured would benefit from the merger strengthening the Faculty, where he would continue to serve through research, teaching and program development.[322] The student paper Farrago quoted the new Dean as providing a 'custodial faculty' for the BAgr 'because [the Faculty – meaning MSLE's non-agricultural components] is being merged with the faculty of Science … the [BAgr] needs a home'.[323] Recalling past merger disruptions, teeth were gnashed inside the Faculty and out – but less vigorously than during past mergers.

Roush's tenure might be characterized as having increased the size of the Faculty through mergers that diversified the Faculty beyond agricultural science. His tenure saw the Faculty budget being balanced under University pressure and at the cost of a strategic professoriate. Roush also rejuvenated the Australian College of Agricultural Deans of which he was the inaugural President of its phoenix iteration. This group, with critical work by Jim Pratley[324] of Charles Sturt University, presented a strong case for increased agricultural education, which was ultimately reflected in a resurgence in Faculty enrolments. Roush's interest in the detail of management and strong advocacy of plant genetic modification in the face of environmental politics assisted the Faculty through a period when agricultural science was poorly understood by both its beneficiaries and the University. But by 2014 Roush was fed up and resigned. Within months he was appointed Dean of the College of Agricultural Sciences at Pennsylvania State University, 'one of the largest integrated academic and outreach units of its kind in the USA with research expenditures approaching $97 (A$125) million annually, 3,000 undergraduate students and 580 graduate students across nine academic departments'.[325] Roush had stepped up from Melbourne's global ranking of universities in agriculture from 32 to Penn State's rank of 11.[326]

This history concludes at this point; the period between Roush's departure, during which this work has been compiled, has seen three occupants of the Dean's chair. Ken Hinchcliff assumed overall Deanship of the combined Faculty for 18 months until he resigned to become President

and Warden of Trinity College at the University.[327] Brian Leury stepped into the breach until the merger could be bedded down. By 2016, the Faculty had some 414 staff, and the newly appointed Dean John Fazakerley observed that 'at present, we offer over 20 courses and 300 subjects to 3,500 students and train approximately 259 research higher degree students on an income of around $100m. We provide the only professional entry veterinary program in Victoria. The Bachelor of Agriculture is the fastest-growing undergraduate agriculture degree in Australia. The Faculty maintains a 2,500 ha working farm at Dookie and a 24-hour animal hospital at Werribee.'[328] Some 34 percent of students were international, 57 percent were in the agriculture stream and the balance in the veterinary stream. The Faculty boasted a research income of $16 million for 2015. At the time of writing, it is managed through two Schools, the Melbourne Veterinary School (Graduate School) and the School of Agriculture & Food.

The Faculty's 'Old Agriculture' building and its 'new' extension with which some 61 percent of the Faculty's 10,800 alumni identifies was rumoured to be replaced by modern facilities to service veterinary and agricultural science students.[329] The agricultural science alumni remain wary that 'agriculture' may disappear from the site, and indeed from the University as it aspires to be the Oxbridge of the South. But it seems that agricultural science will retain its firm grip on the University's landscape along the Parkville Strip beside other faculties sharing the same disciplines in medical, science and veterinary fields as a testimony to the integrated science now essential to this fundamental underpinning of civilization, agriculture.

Chapter 12

Overview: Faculty Names and Faces

Since 1905, the Faculty has traded under various names, including: the Faculty of Agriculture, the School of Agriculture, the School of Agriculture and Forestry, the Institute of Land and Food Resources, the Faculty of Land and Food Resources, the Melbourne School of Land and Environment, and now the Faculty of Veterinary and Agricultural Sciences. It has been served by 22 Deans, of which only six served more than four years, a decanal period that seems to have become common in business schools[330] and might be a portent for applied fields that require currency with their profession. Those longer serving Deans set or changed the culture of the Faculty; Osborne by three-terms of holding together the nascent Faculty, Wadham by firmly establishing the presence of the Faculty, Forster by fostering the Faculty as its monopoly was challenged, Falvey by integrating the government and industry and merging with the colleges, Richardson by addressing irrational management systems in the Faculty and the University, and Roush by diversifying the Faculty to fields beyond agriculture. Faculty names and Deans are presented in the following Table. But such an overview undervalues the changes wrought within the Faculty through its history to date.

Regardless of Faculty names and Deans, the Faculty is more truly represented by its constituent staff, both academic and professional. The Faculty has been blessed by dedicated staff committed to the field of agriculture as well as their own role

in serving its improvement; this includes both specialists and integrators. At least nine leading agricultural scientists from the Faculty have been elected Fellows of the Academy of Technological Sciences and Engineering;[331] many other Faculty members have been with Academy's initiative known as the Crawford Fund, which was created by Academy Fellow and Faculty Dean, Derek Tribe to support the international profile for agricultural science.

Names and Deans Across the Faculty's History

Year	Faculty Name	Deans
1905-26	School of Agriculture	Osborne, Cherry, Ewart, Laby, Richardson
1926-56		Wadham
1957-68		Forster
1969-89	School of Agriculture and Forestry	Tribe, Stubbs, Tulloh, Chinner, Parbery, Beilharz, Ferguson
1990-95		Egan, White
1995-00	Faculty of Agriculture, Forestry and Horticulture to 1997, then Institute of Land and Food Resources	Falvey, Lee Dow
2000-06	Faculty of Land and Food Resources (from 2004)	Richardson, Larkins, Slocombe
2007-14		Roush
	Faculty of Veterinary and Agricultural Sciences (from 2014)	

Such a vocation – a calling if you like – may not be common to all faculties in a university, and it provides a high level of resilience in the face of inadvertent and inappropriate actions in the wider university and beyond. This history indicates some of the many adaptations required of Faculty staff over 11 decades, and through such periods the Faculty continued to rank highly in publications, research income and graduate completions, even at times when it was under pressure for inappropriately allocated debts, countermanded strategies and national downturns of student interest in agriculture.

For most of their existence, both the Faculty and the colleges served government and family farming. The Victorian Department of Agriculture and other government departments were the major employer of graduates at various times up until the 1960s – as technical assistants, extension agents, administrators and applied researchers. As wool was of overriding economic importance until the 1950s – and beyond through artificial pricing – sheep research was a major focus. In parallel, grains, dairying, horticulture and meat grew with markets and technologies that improved efficiencies and variously benefited from rail, refrigeration and canning. Intensification of production from research and technology was complemented by land subdivision and increased labour intensity, for many decades through family farms.[332] From the 1970s, an increased commercial focus and more conspicuous agribusiness was only one factor leading to government largesse wavering; agricultural subsidies were questioned and eventually withdrawn, and government cadetships that paid students and guaranteed their employment upon graduation reduced in number each year. But despite such change, the agricultural colleges continued as if family farms

would remain the economic driver while in fact most would soon be unable to meet the economic demands of capital needed to apply new technologies, meet high labour costs and service the demands of increasingly business-minded banks. The Faculty's teaching and research remained focussed on government and some producers, while larger agri-businesses began to turn to international sources for the latest developments. Seen in these terms the history of agricultural education in Victoria is one of periodic institutional failure to adjust to economic change – or to changes in education policy as in the case of allowing La Trobe to usurp the initiative, and in blithely seeking to integrate the colleges into a University faculty. However, it would be unfair to conclude that integration of agricultural colleges into a university is undesirable. A contrast in Australia is afforded by the University of Queensland's integration of Gatton Agricultural College, which is seen as a more successful merger, possibly because it benefitted from circumstances and actions that did not apply in the Victorian case. For example: only one college was integrated; Gatton was the only agricultural college offering higher education, whereas five of the six Victorian colleges offered some form of higher education; the progressive Darling Downs community supported Gatton more reliably than did the communities surrounding the Victorian colleges; the University of Queensland invested heavily in raising Gatton to its standards, which included relocating many senior staff and combining the agricultural and veterinary faculties; Gatton was well located on a major route to the State's closest and largest inland city, and CSIRO was active in production agriculture in the State. The most similar of the Victorian colleges, Dookie, shared only parts of some of these advantages. Regrettable as much thwarted effort associated with the colleges over two recent decades may be to those

involved, it was a short period in the Faculty's life – throughout which it has remained a national leader with patches of international brilliance.

The history might also be summarized as follows: Upon creation, the Faculty remained in waiting for its first two decades until a dynamic Dean arrived and created a culture of science linked to commerce that suited the next three decades. Then followed a decade of conservatively following national developments while a neighbouring university created a competing course that soon undermined the Faculty's assumed entitlement, until new appointments sought increased collaboration and research activities. Meanwhile, the co-extant vocational colleges in agriculture were languishing in the policy ferment of the last decades of the 20th century and were to be integrated into the Faculty under a plan to create a global leader in key fields of regional significance underwritten by the shedding of duplicative and underperforming components. That grand vision, forestalled by the University's political imperatives, created a financial burden from thwarted staff reductions that focussed attention on frugal Faculty management and rational plans, which were again stymied by University faintheartedness. By the time that the decision to shed underperforming assets was made, it was too late for the grand vision to be realized. A reduced role for the Faculty was imposed with more non-agricultural fields being inserted into the Faculty as the University moved to a liberal arts model that rendered agricultural science less visible. This then allowed the vestigial agricultural sciences to be merged into a new iteration of the Faculty that included veterinary science. And there it rests today awaiting its next resurgence in serving the world's first need, food.

William A. Osborne | Thomas Cherry | William A. Osborne | Alfred Ewart | Thomas Laby

Arnold E. V. Richardson | William A. Osborne | Sir Samuel Wadham | Carl Forster | Derek Tribe

Lionel Stubbs | Norman Tulloh | John Chinner | Douglas Parbery | Rolf Beilharz

Ian Ferguson | Adrian Egan | Robert White | Lindsay Falvey | Kwong Lee Dow

Robert Richardson | Frank Larkins | Ronald Slocombe | Richard Roush

FACULTY OF AGRICULTURE
THE UNIVERSITY OF MELBOURNE

Deans of the Faculty, Chronologically from 1905 to 2014[333]

Chapter 13

Whither Agricultural Science?

Alumni, staff and friends of the Faculty's old agricultural science course may lament its passing, but, in the spirit of its philosophy of systemic wholeness, we do well to perceive changes as part of the overall social environment. What began as a necessity for a novice European culture to adapt to a strange environment and progressed through a period of integrating sound science across disciplines served south-eastern Australia and similar environments elsewhere in the world very well. The spirit was kept alive into the 1960s and 70s with global awareness of the precariousness of world food supply, which as a moral issue motivated many scientific minds to enter the profession despite local society beginning to see it as somewhat less prestigious than commerce, law or medicine. The Faculty waned at times in the absence of genuine competition, and waxed under good leadership and buoyant times. Through most of its life it has been renowned internationally – accolades, literature references and honours bestowed on its professoriate adorn the record. But as this history documents, Deans have carried forward a baton from that past into the current era in a race with agricultural and University environments that have changed markedly.

The University environment has changed with positioning of the institution beside elite international universities that often do not include agricultural science in the manner valued by those in the profession. Agricultural practice has similarly changed with rapid advancement of technologies,

including communication technologies, and now draws from a range of scientific and technological disciplines that cannot be contained within a traditional agricultural science faculty. Such knowledge required integration – but the appreciation of that need is yet to revivify. The social environment in which the Faculty operated has also changed markedly. Up to seven decades ago, agriculture and its integrated science was valued widely, and about five decades ago the moral responsibility to use agricultural science to stave off starvation enthused undergraduates. By contrast today's popular interest in food fashions is seen by those imbued with the agricultural science values of the past as parochial and somewhat superficial. The once waxing awareness of the need to apply agricultural science knowledge to the populous food-deficit regions of the world is in a waning phase that is perhaps poised to change as unplanned immigration is traced to food shortages induced by governance failures and climate change. So, rather than bemoan changes in the means by which agricultural science is perpetuated, we may see its wider appreciation as cyclic with a faithful remnant ever available for its palingenesis.

In this new environment, the resurgence will not mean a return to a past iteration of the Faculty. Yet that past will inform the future. Past agricultural science courses are recalled by many contributors to this history as having been an integrated whole that required sound understanding of physics, chemistry, biochemistry, statistics, economics, applied social science and much more in four intensive years of study that included what were holiday times for other university students. Sometimes referred to with pride as the liberal arts degree of Australia, its graduates excelled in diverse fields of science beyond agriculture. But this became its Achilles' heel as the age of specialization, industry

relevance and student choice advanced. Graduate employment outside agriculture was mistaken for not meeting industry needs, and students increasingly demanded influence on course content. The variably successful Melbourne Model, which has instituted a form of liberal arts that bridges sciences and humanities for most students, adds a touch of irony when the 'liberal' agricultural science course has morphed into a shorter less integrated and less intellectually demanding course without 'science' in its title. Yet it is consistent with the view of 1960s Faculty pedant Geoffrey Leeper that is paraphrased as, if 'during the course of his university studies the undergraduate develops a habit of honest enquiry and has advanced towards independence of thought as a result of the stimulus and example of the academics then the university may be said to have done its job'.[334] Intelligent well-educated graduates of four-year Melbourne Model degrees containing sound science and humanities who continue into postgraduate agricultural science studies may well be the future torch-carriers of the profession.

Such future agricultural scientists, complemented by those from less science-based agriculture courses, will build on the legacy of Victoria's 130 years of agricultural education. As the most agriculturally productive State of one of the world's four percent of nations that are net agricultural exporters, its agricultural science base remains critical to much more than Australia. University urban-bias and industry confusion of higher education with 'job-ready' graduates in the recent past have led to Australian agricultural education being described as 'in some ways [having] a special place … while in other ways [missing] the boat in not taking advantage of opportunities available at particular times'.[335] Yet the words of Wadham in 1927, the longest-serving Dean of the Faculty,

remain true – he emphasized that 'the ultimate aim of any university must be to advance and disseminate learning and the advance of learning is dependent on sound research … we shall most nearly attain that objective if we make one hundred percent of our students realize what research means and what are its difficulties … sound knowledge of the principles of pure science are essential … the student must be made to realize that our knowledge is in a state of transition and that we are probably on the threshold of great advances'.[336] Later Deans have expressed this as 'the agricultural scientist is not a generalist, but is a multi-discipline Specialist',[337] or as a graduate with a broad and deep higher science education informed by an integrated understanding of social, biological and physical interrelationships.[338] This history suggests that Wadham's mission was carried by Bob Reid at La Trobe University at a time when the Melbourne Faculty wandered in its wilderness. If the 1960s proposal to locate La Trobe at Burnley had been implemented,[339] this history of agricultural science and the Faculty might have been different.

Yet despite missed opportunities, agricultural science has maintained a core of commitment. That calling guided the Faculty through lean war years, opaque politics and the mayhem resulting from colleges being encouraged to rebadge as universities.[340] In that last period, some imagined that the integration of skills-based and science-based learning[341] of Scotland's past in which 'the long term well-being of vocational agricultural education require[d] an annual recruitment of good university graduates'[342] still existed in the late 20th century. But the demise of systems with such an ethic was already widespread beyond Australia.[343] The 1990s recollection that 'the [Land Grant

Colleges of the USA] have developed from institutions which were little more than trade schools'[344] was therefore understood by informed Faculty staff as little more than the rhetoric of the merger of the colleges into the Faculty. Informed staff knew the difference – that US Land Grant Colleges were today high performing research institutions with links to extension, while the Australian colleges did not conduct research and had lost their links to extension. But having subscribed to that rhetoric as an instrument of change, it became a challenging management task to coordinate independent colleges, State institutions and universities – one that was destined to ebb and flow with personalities and politics. Today's hindsight allows the informed comment that 'whoever thought that the entity brought together called VCAH could simply be dropped into the University of Melbourne and a new merged entity in agriculture and related areas could take Victoria to the promised land was misguided. But maybe, until the exercise had been tried and worked on for a decade no one could have been quite sure. I think we now are!'[345] With that retrospection, those who managed through the period consider that the merger did not serve interests of agricultural science or general agricultural education.[346] Future higher agricultural education must not make the same error.

Past errors in agricultural education also include: Faculty staff being out of touch with the times; myopia that failed to see that old style of colleges were doomed to disappear; that pork-barrelling was an unsustainable funding mechanism, and that serious agriculturists and agribusiness valued responsive courses such as that of high-fee Marcus Oldham College,[347] which succeeded while fee-free nearby State-owned Glenormiston struggled. Long-time observer of the

Australian rural industries Neil Inall remarked that 'Marcus Oldham has survived because of its independence, the fact that it hasn't been deterred from its mission and to its commitment to practical, on farm work as part of each student's learning. And it's survived because of the lack of government involvement, apart from going for some financial help from, would you believe, Edward Gough Whitlam back in the seventies. It has survived the 20 years of the downgrading of agricultural courses at most of Australia's universities and the old agricultural colleges.'[348] Marcus Oldham never pretended to offer demanding agricultural science education, seeing that as the responsibility of universities. But most such universities were located in capital cities.

University agricultural science education in Australia is a strangely urban phenomenon. Only one older university is located in a rural city, the University of New England in Armidale NSW. By the 1980s, nine universities offered agricultural science, which expanded to some 22 campuses after colleges inflated into higher education before and with the 1989 Dawkins' Reforms – this was more than the nation required. Soon a decline in agricultural student numbers led to a reduction to 11 institutions and culling of about 100 agricultural academic staff. Modified courses and a general resurgence after 2009 shifted the student gender balance to female,[349] an indication of the responsiveness that must extend to other aspects of agricultural education. Attracting capable young minds to demanding university courses relies on priming examples about agriculture in school subjects that both widen students' minds and ensure an educational continuum,[350] yet Victoria has provided scant attention to agriculture in school geography, history, mathematics and science curricula[351] and school-leaver STEM skills remain

lower than in the heyday of agricultural science courses. Such neglect combined with an urban orientation and nostalgic conceptions of 'farming' dragged intakes into agricultural science courses across Australia down to its 2012 nadir of a 45 percent decline from the early 1990s. Without further attention, the current resurgence in enrolments may be an hiatus of survival – an Indian summer – between agricultural science being downgraded to sourcing of science and humanities subjects from diverse faculties without integration.

If the Faculty is in an hiatus between offering a seriously integrated science-based course and just being a provider of another 'broadening undergraduate experience', the leadership challenge is to grasp the current opportunities arising from 'the [2008] world food crisis, the aspirations of the emerging Asian middle class and various Free Trade Agreements [that] have rekindled interest in food production in Australia. This is likely to remain at a high level for at least the ensuing decade, providing a degree of certainty to educational providers that demand for graduates will continue.'[352] Those graduates will be postgraduates who have long been an essential source of innovation[353] in an economic sector with low levels of general education.[354] And research training must build on the integrated understanding forged in undergraduate years from the integrative systems called for in recent studies.[355]

The current iteration of the Faculty as Veterinary and Agricultural Sciences allows focus on such integration and research. Based on a charter implied by an external review of research,[356] commonalities potentially extend beyond the animal sciences into molecular biology, nanotechnology and other fields that blur old divisions between substrates,

microbes, plants, animals and humans, and interact through such understandings as One-Health. The review echoed those of earlier periods, particularly the strategic planning of the 1990s in its focus on agricultural industries in south-eastern Australia as a basis for maintaining global leadership in selected fields. In addition to the practical McKinnon Project, the review highlighted current Faculty strengths of agronomy, crop sciences, plant pathology, molecular genetics, and soil science complemented by such animal fields as genetics, infectious disease, parasitology, pathology, physiology, microbiology and welfare. While it may be unrealistic to expect to lead in all 12 fields, the list provides a basis for future Faculty planning. In such an environment, experienced agricultural scientists remain interested observers of the continuing evolution of the Faculty in such a university as Melbourne.

Some fear that the University's aspirations to greatness are taking it down the paths of Cambridge and Oxford, which abolished their agricultural courses in the early 1970s and the mid-80s respectively, 'masking the change with an introduction of a school of pure and applied biology, which soon morphed into just pure biology and field applications disappeared, except for the study of birds and voles in Wytham Wood'.[357] This does not seem a probable outcome because Melbourne differs markedly from the Oxbridge world in being in the centre of the major agricultural area of a nation financially reliant on agricultural exports to nearby Asia's burgeoning and increasingly wealthy population. And the University of Melbourne remains the largest player in this major region with the largest number of serious agricultural science students[358] with the highest proportion of the research training. This makes agricultural science a clear responsibility of a prestigious university that can

attract high-performing postgraduates from the city and internationally.

Today's agriculture demands sound integrated understanding in research and the application of its outcomes – to continually adapt to ever-new pests, climate and other variables while efficiently increasing food production for expanding populations from reducing lands and mined resources. It is no exaggeration to claim from the past century's experience that our responses to agricultural education today may be one yardstick by which our contribution to human civilization is judged in the future.

University historian Carolyn Rasmussen recently discussed 'buildings as memory', using the old Architecture building's replacement by the new and attractive Melbourne School of Design as a metaphor for the administrative changes that the University has made in adapting to the modern era.[359] She described the University up until about 1990 as akin to its older buildings in being a product of 'unfortunate accretions, false starts, ill-fitting or cumbersome compromises, useful but temporary developments, some brilliant solutions to knotty problems, careful conservation, and bold new ideas'. Within the University, some saw the solid broad base of the Faculty's red-brick 'Old Agriculture' building facing Royal Parade as representative of the stolid image they retained of past practices in agriculture. The building was designed with its back to the System Garden, Botany and the University, even after its new wing incorporating the Dean's office was added, although this was rectified a few years ago when a wall was opened to the light, the Garden, Botany, Zoology and the University. Deans had warded off successive attempts to move the Faculty from the site; recently a Dean was faced with suggestions to redevelop the old red-brick

building, but these have been withdrawn. Thus the firm grip on the earth of the first and extant building of 'Old Agriculture' with its strong presence speaks of a future that awaits the next iteration of agricultural scientists – and of the Faculty.

South-west Corner of 'Old Agriculture': The Dean's Office

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