

DEVELOPING SUCCESSFUL AGRICULTURE

An Australian Case Study

Zhang-Yue Zhou



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To all men and women of rural Australia for their dedication and contribution
to advancing Australian agriculture

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Zhang-Yue Zhou

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Foreword

The remarkable performance of Australian agriculture, amidst substantial dismantling of government supports and interventions over the last three decades, offers tremendous insight for other countries, particularly on what is required to create a successful agriculture sector when it is treated almost equally to any other business or industry in the economy. The development of such an agriculture sector is often a dream for policy makers throughout the world, and a challenge that is often given up due to lack of know-how, courage, or simply because it is considered impossible. Australia offers a great example for countries to consider in this context.

From the 1950s to 1970s, the United States provided a very good example for countries to follow on how to develop their agriculture sectors and achieve food security, and this provided the foundation for the green revolution that solved the world food problem at that time. Today, Australian agriculture can provide a great model for countries to examine as they attempt to develop successful free market agriculture sectors, even in a world where protection is still very common.

Professor Zhang-Yue Zhou is eminently suited to write this book as he grew up in rural China seeing the huge agricultural problems and government interventions there, and has then been an intense researcher and keen observer of Australian and international agriculture for several decades. Zhang-Yue also has an irrepressible zeal and enthusiasm for agriculture, the world food problem, and the well-being of the farmers around the world. It is clear from what I have read that he has put in an enormous amount of effort on this subject and has produced a monumental piece of work that is a must-read for anyone interested in the development of agriculture today, in a free market economy and world.

A major feature highlighted by the book is the institutional framework. The Australian Constitution bestows substantial powers to the states in making laws, policies and programmes for agriculture. This allows the states to tailor their institutions and policies to suit their substantially differing endowments and comparative

advantage. Another very significant feature is the institution of the Productivity Commission. This is a highly independent body of experts that can conduct public inquiries on any major policy question referred to it. The Productivity Commission inquiries are open, independent, transparent and time-bound, and invite views from all constituents of society. The Commission has been used for objective evaluations on numerous major policy questions of national importance, including agricultural policies. The government is free to accept or reject the recommendations of the Commission, but the independent public inquiries become of immense value as open objective evaluations and eventually result in changes in the right direction. Some of the other important institutions highlighted are land rights, and strong agricultural services, both public and private.

Another major feature highlighted by the book is the vibrant apolitical organization of the farmers from grass-roots upwards. Australian farmers have voluntarily formed a huge number of associations, cooperatives, councils and federations for different commodities, critical resources, geographic areas, industries and other interests. These play a major role in organizing solutions and responses to various critical problems, and in empowering contact and representation upwards to the government. They are organized at the apex level into the National Farmers' Federation (NFF). Most of them are marked by dedicated and willing leadership, which is independent and apolitical, and are entrepreneurial and flexible in adapting to setting and change. They serve as great models in providing effective organization, group solutions and representation.

The book shows that Australian agriculture too was heavily regulated until the 1980s, and, as in many countries, the regulations had become complicated, cumbersome, and their effects increasingly obscure. In a series of deregulations starting in the 1980s, various price and production controls were removed, boards dismantled, and quotas and buffer-stocks done away with. The exposure to market forces had substantial implications for many, but the government largely focused on helping farmers to adjust rather than give up the deregulation process. Various rural reconstruction schemes, and specific adjustment programmes, were offered/taken up to support and allow farmers to adjust and become more resilient. It must be noted that different major umbrella supports to all people such as social security, health care and infrastructure provision also, no doubt, helped enormously to soften the impact and prevent misery.

The book highlights the enormous importance of the government effort to encourage entrepreneurship in farmers: to transform farmers from producers to business operators. The provision of information, and attracting investments to assist them, has also been very important. Efforts to encourage innovative farming by promoting innovations and breakthroughs through schemes, competitions and rewards, were also very important and gave great results. At the higher level, one of the major long-term issues is market failure in R&D resulting in declining R&D investment. A unique solution that evolved in Australia is the creation of Rural Research & Development Corporations. These are formed and supported through producer levies, industry contributions, and matching grants from the government. A special PIERD Act has been passed to provide a framework so that the corporations have independent boards, regular processes of planning and reporting, and to encourage collaboration. The structure results in

promotion and support of relevant research, thereby preventing market failure and underinvestment in R&D.

The book also indicates recent efforts to foster sustainable farming, and create an environmentally conscious public and farming community. One of the major recent examples has been the effort to develop a Murray-Darling Basin Plan, which can give an adequate provision of water for the environment. The book then discusses the new challenges facing Australian agriculture including: volatile world markets; volatile weather/climate change; and the problems of farm succession, labour and skill shortage. The book indicates that getting institutions right is the most important factor, particularly to results in strong R&D, continuing education and development of public infrastructure, which are extremely important for the future. The book emphasizes the strong need to support and respect farmers, so that Australia, and the rest of the world, can have healthy agriculture sectors that can produce enough food.

Having been a keen international researcher on policies, institutions, and challenges of food and agriculture in the world for over three decades, I found this book extremely interesting and insightful, and I strongly recommend it to all readers in developing and developed countries.

Vasant P. Gandhi, PhD (Stanford)

Professor

Centre for Management in Agriculture

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Preface

Agriculture remains a very important industry to developed but especially to developing countries. For those developing countries where agriculture is dominant, economic take-off still has to rely on substantial growth in their agriculture. This growth generates funds and releases labour for other industries. And improved income enables farmers to purchase more of the goods and services produced in the urban system. This then encourages urban production expansion, resulting in increased urban employment. Higher demand for workers in the urban system leads ultimately to the increased absorption of labour that becomes surplus to rural requirements.

Unfortunately, many agrarian economies in Africa, South Asia and South America are still suffering from a lack of agricultural growth. In most of these countries, institutional arrangements that could support the growth of agriculture are either weak or absent. In some societies, agriculture remains an industry that people look down on. Hence, helping poor developing countries to advance their agriculture is most desirable. Sharing the agricultural development experiences of developed countries with developing countries is one way to provide this help. This has been the major motivation for writing this book.

The other important reason for showcasing Australia's agriculture is my long-time exposure to it. I have lived in Australia for over 25 years. With my strong agricultural background and interest, I have always paid much attention to issues related to Australian agriculture. I have had extensive interactions with many people involved in Australian agriculture, from farmers, traders, consultants and researchers to policy makers in government departments and industry bodies. I admire Australian farmers, who have done wonders to develop this country's agriculture.

In a short history of a little over 220 years, Australian farmers have advanced Australian agriculture from non-existence to where it is now: one of the most advanced and efficient in today's world. This book showcases the development of

Australian agriculture and draws implications for other countries about what they could learn from the lessons and experiences of Australian agriculture. It is written chiefly for agricultural and rural policy makers in government departments and international development agencies, leaders of peak bodies of agricultural industries, researchers, agribusiness consultants and university undergraduates and postgraduates who study courses related to agricultural and rural development.

The writing of this book has benefited not only from the existing literature and publications but also from discussions and exchanges with a number of personnel who are heavily involved in Australian agriculture. The generous financial support provided by the Rural Industries Research and Development Corporation (RIRDC) in Canberra and my university, James Cook University in Townsville, made it possible for me to travel to all states and territories for extensive and in-depth discussions and exchanges with farmers, researchers, traders, industry leaders and government officials. During these visits, I also had the opportunity to inspect farm fields, trading facilities, research laboratories and so on. These personal interactions and experiences assisted me greatly in refining my understanding and thoughts about Australian agriculture.

Zhang-Yue Zhou

Townsville, Australia

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Abbreviations

AAA: Agriculture – Advancing Australia
ABARES: Australian Bureau of Agricultural and Resource Economics and Sciences
ABR: Australian Business Register
ABS: Australian Bureau of Statistics
ACF: Australian Conservation Foundation
ACIAR: Australian Centre for International Agricultural Research
ACT: Australian Capital Territory
AEC: Australian Environment Council
AGO: Australian Greenhouse Office
AHA: Animal Health Australia
ALP: Australian Labor Party
ANZECC: Australia New Zealand Environment and Conservation Council
AQIS: Australian Quarantine and Inspection Services
ARMCANZ: Agriculture and Resource Management Council of Australia and New Zealand
ASCC: Australian Soil Conservation Council
ASU: Amalgamated Shearers' Union
AUS\$m: million Australian dollars
AWB: Australian Wheat Board
AWC: Australian Wool Corporation
AWRC: Australian Water Resources Council
BSES: Bureau of Sugar Experiment Stations
CFC: Caring for our Country
COAG: Council of Australian Governments
CONCOM: Council of Nature Conservation Ministers
CPRS: Carbon Pollution Reduction Scheme
CRC: Cooperative Research Centre

CRRDC: Council of Rural Research and Development Corporations
 CSIRO: Commonwealth Scientific and Industrial Research Organization
 CWFS: Central West Farming Systems
 DAFF: Department of Agriculture, Fisheries and Forestry, Australian Government
 DEEDI: Queensland Department of Employment, Economic Development and Innovation
 DPI: Department of Primary Industries
 DRIS: Debt Reconstruction with Interest Subsidy
 EMDG: Export Market Development Grants
 EU: European Union
 FHS: Farm Household Support
 FTA: free trade agreement
 GAB: Great Artesian Basin
 GGIP: Grower Group Innovation Project
 Gl: gigalitre
 GVP: gross value of production
 HAL: Horticulture Australia Limited
 IAC: Industries Assistance Commission
 IC: Industry Commission
 IOC: industry-owned corporation
 IR: industrial relations
 LWA: Land and Water Australia
 MCFFA: Ministerial Council on Forestry, Fisheries and Aquaculture
 MCJ: material change of use
 Ml: megalitre
 MLA: Meat and Livestock Australia
 MMC Co-op: Molong, Manildra and Cumnock Co-op
 NFF: National Farmers' Federation
 NRM: natural resource management
 NRMCMC: Natural Resources Management Ministerial Council
 NSW: New South Wales
 NT: Northern Territory
 NTCA: Northern Territory Cattleman's Association
 OECD: Organisation for Economic Co-operation and Development
 OH&S: occupational health and safety
 PBSA: Pastoral Board of South Australia
 PC: Productivity Commission (Australia)
 PHA: Plant Health Australia
 PIERD Act: Primary Industries and Energy Research and Development Act 1989
 PIMC: Primary Industries Ministerial Council
 PSE: producer support estimate (formerly, producer subsidy equivalent)
 QLD: Queensland
 QSC: Queensland Sugar Corporation
 RaL: reconfiguration of a lot
 RAS: Rural Adjustment Scheme
 R&D: research and development
 RDC: Research and Development Corporation

RD&E: research, development and extension
RGA: Ricegrowers' Association of Australia Inc.
RIRDC: Rural Industries Research and Development Corporation
RRS: Rural Reconstruction Scheme
SA: South Australia
SAFF: South Australian Farmers' Federation
SCoPI: Standing Council on Primary Industries
SEMP: Shoreline Erosion Management Plan
SEA: Statutory Funding Agreement
SRDC: Sugar Research and Development Corporation
TAFE: technical and further education
TAS: Tasmania
TFGA: Tasmanian Farmers and Graziers Association
TPP: Trans-Pacific Partnership
VIC: Victoria
WA: Western Australia
WI: Wool International
WTO: World Trade Organization

Glossary

Agriculture: *agriculture* in this book is defined to include *farming*, forestry and fisheries.

Australian Government: the *Australian Government* is Australia's central government. It was known formerly as the Commonwealth government or the federal government. All these three names are used in this book. The Australian Government is also often referred to as the government. The Australian Government passes laws that affect the whole country. Section 51 of the Australian Constitution defines a number of issues on which the Australian Government can make laws. When 'Australian governments' are used in this book, it includes both the Australian Government and the *state* and *territory governments*.

Australian Labor Party: the *Australian Labor Party* (ALP) is Australia's oldest political party, formed in 1890. It has governed federally for about one-third of the years since federation, most recently between 1983 and 1996, under Bob Hawke and Paul Keating, and since 2007 under Kevin Rudd and Julia Gillard.

Australia's federation: Australia's formal name is the Commonwealth of Australia, which was formed in 1901 when six independent British colonies agreed to join together and become states of a new nation. The Australian Constitution enshrines the rules of government and defines how the Australian Government is to operate and on what issues it can pass laws. The birth of Australia is often referred to as 'federation' because the Constitution created a 'federal' system of government. Under a federal system, powers are divided between a central government and individual states. In Australia, power was divided between the Australian Government and the six state governments.

Broadacre: in Australia, *broadacre* refers to farms engaged mainly in growing cereals and oilseed and/or running sheep or beef cattle. According to the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES),

the broadacre sector of Australian agriculture is defined to include five industry types:

- Wheat and other crops industry: farms engaged mainly in growing cereal grains, coarse grains, pulses and oilseeds.
- Mixed livestock–crops industry: farms engaged mainly in the production of sheep and/or beef cattle in conjunction with substantial activity in broadacre crops such as wheat, coarse grains, oilseeds and pulses.
- Sheep industry: farms engaged mainly in running sheep.
- Beef industry: farms engaged mainly in running beef cattle.
- Sheep–beef industry: farms engaged mainly in running both sheep and beef cattle.

Department of Agriculture: both the *Department of Agriculture* and Department of Primary Industries (DPI) have been used to name those departments that serve the agricultural industries in Australia at both the federal and state levels at different times. Over time, some other words such as forestry or fisheries have been added or deleted from these names. In this book, 'Department of Agriculture' has been used frequently, although occasionally Department of Primary Industries is also used interchangeably.

Department of Primary Industries: see *Department of Agriculture*.

Farmer: in this book, *farmer* refers to anyone who is engaged in agricultural production, including graziers or pastoralists.

Farming: *farming* is defined to include crop production and livestock production.

Grazier: see *Farmer*.

Levels of governments in Australia: there are three levels of governments in Australia. At the federal level is the *Australian Government*. At the state level are the *state and territory governments*. At the local level are the *local governments*.

Liberal Party: the *Liberal Party* was formed originally from a merger of the Protectionist and Free Trade parties in 1910. In coalition with *The Nationals*, it has governed federally for about two-thirds of the years since federation, most recently for nearly 12 years under John Howard (1996–2007).

Local government: *local governments* are established by the *state and territory governments* to take responsibility for a number of community services such as waste collection, public recreation facilities, town planning. Local governments have a legislature and an executive but no judiciary. Their powers are defined by the state or territory governments that established them. Local governments are also known as local councils. The naming conventions for local governments vary across Australia. They can be called cities, shires, towns or municipalities.

National Party: see *The Nationals*.

Paddock: in the case of Australian agriculture, a *paddock* is a block of land used for agricultural purposes. It is generally fenced for the purpose of animal production. It can also be fenced for crop production, but generally is not. The size of a paddock varies greatly depending on the purpose of land use.

Political parties in Australia: political parties are central to an understanding of how Australian politics works. They dominate state and federal parliaments, provide all governments and oppositions and frame the nature of political debate. Australia's party system is dominated by two major groups, the *Australian Labor*

Party and the coalition parties, the *Liberal Party* and *The Nationals*. In addition to these three major parties, a wide range of minor political parties exists in Australia, such as the Australian Greens and the Australian Democrats.

State and territory government: each *state government* retains the power to make its own laws over matters not controlled by the Australian Government under Section 51 of the Constitution. State governments also have their own constitutions, as well as a structure of legislature, executive and judiciary. There are six states in Australia: New South Wales (NSW), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC) and Western Australia (WA). Territories are areas within Australia's borders that are not claimed by the states. There are ten Australian territories. Territories can be administered by the Australian Government or they can be granted a right of self-government. Self-government allows a territory to establish its own government in a similar manner to a state. Two mainland territories, the Australian Capital Territory (ACT) and the Northern Territory (NT) and one offshore territory, Norfolk Island, have been granted a limited right of self-government by the Australian Government. Outside of government, the ACT and the NT are often treated like states. The other seven territories, governed only by Commonwealth law, are: Ashmore and Cartier Islands, Australian Antarctic Territory, Christmas Island, Cocos (Keeling) Islands, Coral Sea Islands, Jervis Bay Territory and Territory of Heard Island and McDonald Islands.

The Coalition: the *Coalition* in Australian politics refers to a group of centre-right parties that has existed in the form of a coalition agreement. The Coalition partners are the Liberal Party and the National Party. The status of the Coalition varies across the Commonwealth and states. The Coalition's main rival for government is the centre-left *Australian Labor Party*.

The Nationals: originally known as the Country Party, it has held seats in the federal parliament since 1919. Its name was changed to the National Country Party in the 1970s and then to the National Party in the 1980s. In 2003, the name was changed to *The Nationals*. Federally, it has governed in coalition with the Liberal Party. National Party is used more frequently in this book.