



Governing Australia's Dairy Farm Workforce: A New Terrain for Negotiating Rural Community Sustainability

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Abstract. Amidst heightened policy interest in the future of agriculture, there is an emerging new focus on the topic of the farm workforce in Australia. Will agricultural industries have the people – both farm business owners and employees – that they need? While government and industry are focused on the sustainability of production, farm workforce dynamics also intersect with wider economic and social processes in rural communities, an issue of ongoing concern for rural studies scholars. Here we examine currently emerging policy and action on farm workforce issues from a governance perspective, using the dairy industry in the Australian state of Victoria as a case study. Drawing on both governmentality and political science approaches, we explore workforce governance through three overlapping studies: policy-making, farmers' lived experiences and industry-led collective action. Across the three studies we ask, first, what is revealed about neo-liberal agricultural industry governance and, second, what possibilities the new focus on workforce creates for rural communities concerned about social and economic sustainability. We argue that the farm workforce as a policy object crystallizes the tension between the strongly individualizing discourse of neo-liberalism and the pursuit of public policy objectives framed at the collective scale. If the neo-liberalizing project is understood as a work in progress, then the issue of the farm workforce can be seen as another dilemma to be worked through. In this the roles of collective agents and spaces in both agricultural industries and in communities are critical, making the farm workforce a terrain for innovation in which rural communities can negotiate their interests afresh.

Introduction

Agricultural policy in Australia has been on a neo-liberalizing trajectory for more than 30 years (Pritchard, 2005a, 2005b; Lawrence et al., 2012), and is cited as an example of the advanced liberal shift in modes of governing: from *government* to *governance* (Cheshire and Lawrence, 2005b). The shift to governance denotes a reallocation of roles and responsibilities, and a blurring of boundaries, between state

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actors, private sector actors, communities and citizens (Goodwin, 1998; Stoker, 1998; Higgins and Lawrence, 2005). Agricultural industries in Australia comprise a complex institutional architecture and governance practice, involving farmer-governed research and development corporations (jointly funded by farmer levies and government), continued government activity in research, regulation and some service delivery, agri-political groups at various scales, and largely unsubsidized, globally engaged supply chains (Dibden and Cocklin, 2010).

In Australia, as in many other countries, there has been a renewed interest in the fortunes of agriculture as a result of the 2008 world food price crisis (Cribb, 2010; Rosin et al., 2012; Farmar-Bowers et al., 2013). While some see great opportunities for Australia's technologically-advanced, export-oriented agriculture to be the 'food bowl' for the growing, increasingly affluent and increasingly urbanized populations of Asia and the Middle East (Linehan et al., 2012), others point to constraints and vulnerabilities such as declining research and development investment, declining rates of productivity growth, finite resources of land, water, energy and nutrients, vulnerability to climate change and ongoing negative environmental impacts (Beilin et al., 2011; Lawrence et al., 2012; Hochman et al., 2013).

A further area of concern relates to the human-resource needs of agriculture. Confronting evidence of an ageing farm workforce and low rates of recruitment of young people into farm careers (Barr, 2004; Barr et al., 2005), policymakers and agricultural industries are concerned about the ability of agricultural industries to attract the people they need to sustain themselves (Stehlik, 2009), a concern shared in most other industrialized nations (AFI, 2005). Ageing of the Australian farm workforce has been noted for some time (Garnaut and Lim-Applegate, 1998) and census data indicate that between 1976 and 2001 the proportion of Australian farmers (inclusive of owner-operators and employees) aged in their 20s declined by 60% (Barr, 2004, p. 1), while in Victoria over the period 1976–2006 the average age of farmers increased from 45 to 52 years (Victorian Government, 2011, p. 15). While these trends are less pronounced in the dairy industry than in some others (Barr, 2004) nevertheless they are still present, with the median age range for Australian dairy farmers rising from 30–34 to 40–44 between 1981 and 2006, and with half of dairy farm owners now aged 51 or over (Dairy Australia, 2011, p. 42).¹

A range of interrelated dynamics is involved in these changes, including structural ageing of the Australian population at large, structural change in agriculture leading to an ongoing decline in the number of farm businesses, the relative attractiveness of agriculture in comparison to other careers, a weakening of the tradition of family succession and higher entry costs into farming due to high land values (Alston, 2004; Nettle et al., 2008; Barr, 2009; Cuervo and Wyn, 2012; Wheeler et al., 2012). The Australian experience also has parallels internationally (Oldrup, 1999; Auclair and Vanoni, 2003; Parent, 2012; Terrier et al., 2012).

These issues have attracted the attention of both government and industry (Commonwealth of Australia, 2007; Dairy Australia, 2011; RRC, 2012), who view them predominantly as a matter of *workforce*. While the trends have been observable for some time, this level of policy engagement is new. At the scale of the farm, the term workforce is used to refer to farm labour (employees or contributing family workers) and a shortage of suitably skilled people is certainly a concern in many industries. At the scale of an industry or region, however, the term has a broader scope and includes farm owners and managers as well as contributing workers. Our focus is on workforce in this broader sense.

The implications of agricultural restructuring for rural communities have long been an issue of concern in Australia (e.g. Lawrence, 1987; Stayner and Reeve, 1990; Gray and Lawrence, 2001; Alston, 2004; Cocklin and Dibden, 2005), and internationally (e.g. Van der Ploeg, 2008), but have not been approached previously through the lens of workforce policy and action. Changes in farm ownership and business models, and in employment practices, all directly influence social and economic processes in communities (e.g. Santhanam-Martin and Nettle, 2012), thus it is important to examine what the implications are for rural communities of this new policy turn. Is it simply 'competitive productivism' reasserted (Dibden et al., 2009), or is a new policy space for communities created? Here we report on a study carried out in the Australian state of Victoria, with a specific focus on the dairy industry.

Governing the Farm Workforce: Theoretical Perspective

Scholarly interest in the concept of governance has exploded in recent decades. Goodwin (1998) identifies separate literatures in the disciplines of institutional economics, international relations, organizational studies, sociology, public administration and political science and argues that what is shared across disciplines is a 'concern with identifying and analysing a wide range of modes and mechanisms of co-ordination' (Goodwin, 1998, p. 8). Scholars of governance are interested in how steering or coordination occurs within social collectives, at scales ranging from the local (e.g. Smyth et al., 2005) to the global (e.g. Peine and McMichael, 2005).

A particular focus has been the observation that the way societies are governed appears to have changed, often characterized as a shift from *government* to *governance*, denoting that under the influence of globalizing processes and neo-liberal inspired restructuring, governments have both a reduced desire and a reduced capacity to act autonomously to achieve public policy objectives. Rather, effective action depends on the cooperation of a range of other actors in the private and not-for-profit sectors, and in communities. 'Network governance' and 'differentiated polity' (Rhodes, 1997, 2007) have emerged as popular (but contested) descriptors of this mode of action. An approach to the study of the public realm that takes this observation as its starting point has been described as a 'governance perspective' (Stoker, 1998); however, Griffin (2012) cautions that different scholars and disciplines currently approach governance from quite different theoretical perspectives.

The *governmentality* approach has been used most commonly in critical agri-food and rural studies. This approach builds on Foucault (1991) and Rose and Miller (1992) to argue that the governing of rural areas and industries under advanced liberalism happens through 'action at a distance' (Cheshire and Lawrence, 2005b; Cheshire, 2006; Cheshire et al., 2007). Through creating and steering networks of actors, including communities and citizens, government is able to create self-managing collectives all enrolled more or less in the goal of entrepreneurial self-responsibility. Cheshire (2006) uses this approach to unpack the operation, through particular practices, of the discourse of self-help in Australian rural development. She highlights the modes of agency that remain available for communities and citizens, but concludes that these do not fundamentally challenge the overall neo-liberalizing project.

A further development of the governmentality approach has been to incorporate insights from actor-network theory (see e.g. Law and Hassard, 1999) regarding the agency of non-human actants. Higgins (2002, 2005), for example, posits particular business management practices ('calculation'), embedded in technological devices,

as an example of social technology used to govern farmer behaviour 'at a distance'. An extensive literature on agri-environmental governance explores an even larger range of mechanisms whereby agricultural industries and farming practices are governed, including market instruments, standards and international treaties (e.g. Tilzey, 2006; Lockie and Higgins, 2007; Higgins et al., 2008; Lockie, 2009). The governmentality perspective thus alerts us to the subtle and multiple ways in which steering and coordination occur under governance.

Farm workforce as an object of governance has not been studied or theorized extensively in this way. It could perhaps be argued that farm workforce change is simply an aspect of the broader and well-theorized process of agricultural restructuring, and thus not worthy of further study. We reject this argument on two counts. First, we note that in Australia it is governments and industry that have asserted workforce as a new policy focus and this move itself needs to be understood, as part of the scholarly project of understanding agricultural governance. Second, we observe that workforce as a policy object has conceptual currency both within and beyond the agricultural policy domain, and, as we will argue below, this makes it inherently interesting when considering implications for rural communities.

Noting the novelty of the topic area, we explore it initially from a public policy perspective, focusing on institutional arrangements, roles and responsibilities, and how they play out in practice. Rhodes (2007) has surmised that governing as it occurs in practice is more fluid and uncertain than is suggested by a static view of institutional arrangements, and posits the importance of beliefs, practices, traditions and dilemmas in conditioning actors' interactions. He calls for a 'relational' view of governance and recommends ethnography as an appropriate methodology for investigating governance in practice. It is a broadly ethnographic approach to the study of governance of the farm workforce that we adopt here, while remaining cognizant of the insights of governmentality theorists. We will argue that framing agricultural industry development as an issue of workforce in fact highlights a policy dilemma for neo-liberalism.

Background: Victoria's Dairy Industry

The study is concerned with Australian agriculture, with a specific focus on the Australian state of Victoria.² We focus on Victoria's dairy industry because it is the state's most valuable agricultural industry in terms of farm-gate value of production, and as such the farm workforce issues associated with it have attracted significant policy and implementation attention (see e.g. Nettle and Johnson, 2006; Nettle et al., 2008, 2010; Dairy Australia, 2011).

Victoria is home to the largest portion of the Australian dairy industry, with 4,200 dairy farms producing around 6 billion litres of milk annually: 60% of Australia's total production. The average size of Victorian dairy herds is around 280 cows (Dairy Australia, 2013a; State of Victoria, 2013). Around 12,000 people work on Victorian dairy farms of whom two-thirds are owner managers, and a quarter employees, with the balance being contributing family workers (Dairy Australia, 2011). Data reported here come from studies conducted in the north-east and south-west regions of the State, shown in Figure 1.

Neo-liberal inspired restructuring of the Australian and Victorian dairy industries culminated with the end of government involvement in price setting for fresh drinking milk in 2000 (Cocklin and Dibden, 2002); the evolution of industry gov-

ernance arrangements since that time has been examined by Dibden and Cocklin (2010). Other than state government, the key actors involved in workforce issues are the milk processing companies and Dairy Australia – the industry's research and development corporation. It is noteworthy that the largest of the milk processing companies, processing about one third of Australia's milk, is a farmer-owned cooperative, Murray Goulburn Co-operative. Dairy Australia is funded by a compulsory production-based levy on dairy farmers, which is then matched dollar for dollar by the federal government. It has been proactive in developing collaborative approaches to innovation (Nettle et al., 2013), in the context of ongoing change in state government service provision (Hunt et al., 2012). As part of a decentralized approach to service delivery, Dairy Australia has established legally separate entities known as regional development programs (RDPs) in each of Australia's dairy production regions, three of which are in Victoria. One of these RDPs, WestVic Dairy, is significant in the research reported here.

Both prior to, but especially since deregulation, the trajectory of change in dairy farming has been in the direction of fewer, larger farms, as a response to the cost-price squeeze on profitability (Dibden and Cocklin, 2010). Although farm-gate prices have trended up over the last 10 years they have also become far more variable, and input costs have also been increasing steadily, creating very challenging operating conditions for farmers (Dairy Australia, 2013b), particularly in the context of the long drought that affected all of Victoria's dairy regions from 2000 to 2008. Since 2011, a particular feature of the environment in which farm-gate milk prices are set has been the so-called 'milk wars', fought between Australia's dominant food retailers (Scopelianos, 2013), part of the noted shift of power in the global agri-food system from processors to retailers (Burch and Lawrence, 2005; Hattersley et al., 2013). The impact is less pronounced in Victoria, where the majority of dairy product is destined for export and where the export price is therefore a more important influence on farm-gate price (Dairy Australia, 2013a); nevertheless, pressure on farm



Figure 1. Locations of study sites in the state of Victoria, Australia.

profitability remains an important feature of the operating environment for dairy farmers, and thus important context for this study.

Study Aims and Research Method

This study aims to examine emerging policy and action on the farm workforce in Australia in order 1. to contribute to an overall understanding of agricultural industry governance under neo-liberalism, and 2. to identify resulting implications and opportunities for rural communities. Noting Rhodes' (2007) call for ethnographic approaches to studying governance, we adopted a qualitative methodology consisting of three study components exploring: 1. policymakers' perspectives (RRC, 2012); 2. the lived experience of dairy farmers; 3. a case study of 'governance in action' (In2Dairy; Dairy Australia, 2010). Across the three components our analysis focused particularly on the roles of government, industry, communities and individuals: as they are put forward in policy, as they are experienced by farmers and as they play out in practice.

The Policy Perspective

In February 2011 Victoria's State Parliament resolved to conduct an Inquiry into the Capacity of the Farming Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce. The Rural and Regional Committee of the Parliament, which was tasked with carrying out this inquiry, tabled its final report in May 2012 (RRC, 2012), and the Victorian government tabled its response six months later (Victorian Government, 2012). We will refer to these two documents as the RRC Report and Response. Their significance as objects of study stems first from the diverse and voluminous nature of the evidence canvassed. The inquiry received 71 written submissions from farmers and other individuals, local governments, farmer associations, community groups, educational and research institutions, government departments and private sector organizations, and held 19 public hearings around the state, over a six-month period. Second, the committee involves state-level parliamentarians from both sides of Australian politics, who in this instance tabled a consensus report, indicating a degree of bipartisanship in the way the farm workforce issues is being approached. A thematic analysis of the reports' contents is provided, focusing in particular on how farm workforce issues are understood, on what actions are proposed, and by whom.

The Lived Experience

Between August and October 2012, we conducted in-depth interviews on 18 dairy farms within a single geographically discrete river valley in north-east Victoria. The valley contains 28 dairy farms in total, and dairy farming is both a significant contributor to overall economic activity and a significant feature of local communities' self-identity. Our respondents were recruited by snowball sampling, beginning with introductions provided by two key informants. The recruitment process also generated basic information about the remaining 10 farms where interviews were not conducted, and our sample is inclusive of the major dimensions of diversity in the valley's dairy farms as a whole. Interviewees ranged in age from mid-20s to late-70s,

with the largest group in their 40s. Farm size ranged from a milking herd of 150–450 cows, with the largest group in the range 200–250 cows. The sample includes farms owned and managed by a single nuclear family and by extended family partnerships, farms largely operated by share-farmers, one farm operated by lessees, and one farm managed by an employed professional manager. Ten of the farms employ non-family workers on an ongoing basis.

Twenty-three men and eight women participated in the 18 interviews. Interviews lasted between 30 minutes and two hours, and were semi-structured with the main areas covered being personal histories, farm business trajectory, local dairy industry trajectory, perceptions and experiences of the local community and perceptions and experiences of the roles of dairy industry governance actors. Interviews were transcribed in full and then analysed thematically.

Governance in Action

In south-west Victoria in 2010–2011 a collection of stakeholders undertook a collaborative project aimed at creating a pathway for entry by unemployed people into the dairy industry, via training as assistant farmhands. The project was called In2Dairy Assistant Farm-hand Training Project and is referred to as In2Dairy in this article. Here we draw on data we collected as part of a formal evaluation of the project. Data include transcriptions of audio-recorded steering committee meetings (eight meetings through 2010–2011), semi-structured interviews with a sample of farm employers regarding their motivations for being involved in the project (n=7) and feedback from participating jobseekers concerning their experiences, through a brief written survey (n=12). We draw also on project documents, including the project design document and business plan, and research journal entries stemming from researcher involvement as a participant observer in an action research process that included facilitating reflection by steering committee members.

The Policy Perspective

The establishment by the Victorian Parliament of an 'Inquiry into the Capacity of the Farm Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce' is evidence of recognition by government of a public policy problem. In the context of having already set a strategic policy goal of doubling agricultural production by 2030 (Gray, 2012), the Parliament tasked the committee to:

1. examine the benefits to the agriculture sector of attracting more young farmers;
2. examine the factors that affect the ability of the agriculture sector to attract and retain young farmers; and
3. provide strategies and recommendations that will promote the realization of the benefits identified above (RRC, 2012, p. iii).

Commitment to Neo-liberalism Remains

The resulting RRC Report takes as given Australia's commitment to a deregulated, and free-trade aligned agricultural policy stance, according to which Victorian farmers must compete in globalized markets. Global commodity prices are grouped with

input prices and the weather as 'uncontrollable variables' (RRC, 2012, p. 131), which contribute to an inherently uncertain operating environment for farmers. The long-term decline in farmers' terms of trade is noted, and credited as an important driver of the ongoing trend towards fewer, larger farms: 'Declining terms of trade, as input costs increase annually while returns trend flat or downwards, means productivity must increase for a business to remain viable. One of the simplest ways to achieve this is through increasing the size of the farm' (RRC, 2012, p. 8). Young people, the report argues, will only be attracted to and retained in a farming livelihood when it can offer them an acceptable standard of living and opportunity to generate wealth.

While thus clearly acknowledging the very challenging operating conditions that confront many Victorian farmers, the report focuses on conveying a sense of great opportunity: 'Global economic trends, whether it be our proximity to the Asian powerhouses or the growing value of protein-based products, mean Australian farmers should look to the future with confidence. The challenge for agriculture is to help young Victorians understand their role in this positive future' (RRC, 2012, p. 15).

Further Restructuring Required

The report emphasizes that some Victorian farmers (and especially younger ones) are succeeding in agriculture. These are the larger farms, managed with business principles, often still family owned but employing non-family labour, using modern technology and best practices (including employment practices) to produce profitably. The challenge therefore is how to transform Victorian agriculture such that this model becomes the dominant one, and this necessarily involves letting go of old mindsets: 'The farming sector itself will only be threatened if it does not adapt and provide the professional workplace environments that young people are attracted to and are readily available in other professions. The evidence at this stage suggests agriculture is changing too slowly' (RRC, 2012, p. 9).

Thus the social reproduction of farming is seen to be conditional on farms being economically viable, and there is a need for both productivity improvements and scale expansion of farms to be encouraged and facilitated, to enable the creation of farms that are viable in these terms. With reference to productivity improvement, the government's Response notes its ongoing investment and effort in 'targeted research and development, improved biosecurity and improving market access [to] support the ability of industry to increase profits and attract increasingly skilled entrants' (Victorian Government, 2012, p. 5).

With reference to farm scale, the RRC Report notes that the capital value of viable-scale enterprises often puts them beyond the financial reach of most young people, and that therefore that there is a need to create and promote new models of what it is to be a farmer, or to have a career in agriculture, such that outright ownership of land is no longer an assumed goal: 'The Committee believes that the result of this will be fewer farm owners but increased opportunities for farm management positions and contracting', labelling this 'a substantial intergenerational shift in ownership structure and workforce participation' (RRC, 2012, p. 8).

Agricultural Industries to Take the Lead

The report is emphatic that in most cases agricultural industries carry the main responsibility for enabling this change: 'Evidence that the Committee heard through-

out this Inquiry overwhelmingly supports the idea that the main responsibility for – and knowledge about – attracting and retaining young people lies with the farming sector itself... The issues... need to be tackled first and foremost by industry' (RRC, 2012, p. 13).

From the examples of specific initiatives that are cited it is clear that government's use of the term 'industry' in this context refers primarily to the industry peak bodies and research and development corporations, rather than to individual farm businesses. The report countenances a much more circumscribed role for government: 'Governments need to know both what they cannot do as well as what they can... It is the Committee's view that the state government can work in partnership with industry... but government cannot do that without industry making the first move' (RRC, 2012, p. 14).

Nevertheless the report makes 373 specific recommendations for action on the part of government. Almost half of them relate to improving the reach and quality of agriculture-related education at secondary and post-secondary levels, which is a domain where the state government retains clear responsibility. Another large group of recommendations are concerned with promotion of the opportunities available in agriculture, to counter what the report considers to be an 'image problem'. Most of the recommendations are for the state to support (in an unspecified way), encourage, partner with, collaborate or coordinate with other actors, particularly agricultural industries, but also education providers and departments in the state bureaucracy.

Communities of Choice

The report devotes one chapter to the issue of farms and farmers' relationships with the communities in which farming takes place, and notes their mutual dependence: infrastructure and services can only be maintained when there is a population there to be served, while conversely people are attracted to live in places where adequate services and facilities are available. The report's recommendation on this issue is vague: 'That the state government work with rural communities and other levels of government to support the development of appropriate infrastructure and services' (RRC, 2012, p. 290), and the report posits that rural communities themselves must take responsibility for securing the services they need, and for doing what it takes to be 'communities of choice' that young people will want to move to or return to (RRC, 2012., p. 283). This theme is taken up in greater detail in the government's Response, under the heading of 'importance of regional liveability'. A specific government programme in another portfolio area is identified, which focuses on 'empowering communities to make decisions', positing that 'local people have a role to play in addressing the challenges faced by their communities', and that 'regional development requires strong leadership at the local and regional level' (Victorian Government, 2012, p. 7).

The desired roles for government, industry, communities and individual farm-business owners emerge clearly in the discussion above. We now turn our attention to a specific group of farmers in a community of place, to explore how this allocation of roles maps onto the lived experience of agricultural change.

The Lived Experience

Reflecting on the trajectory of change in dairy farming in their locality, interviewees spoke of the underlying suitability of the environment for dairy production, and yet

of the steady decline in the number of dairy farms. They ascribe this to a combination of the cost-price squeeze on farm profitability, an ageing population of farmers and low recruitment of young people as 'successors' on family farms:

Bruce: 'It's the ideal place. But yeah, there's less and less, each year...'

Sue: 'More work but less money.'

Bruce: 'Yeah, but what I'm sort of getting at, every year there's one dairy farm that drops off. So that makes it sort of hard' (Interview 25A, couple, 50s).

'Because like [my brother] and myself, we're the only ones that stayed here. Everyone, all our mates, all went west and mining' (Interview 29A, male, 20s).

At the same time the average size of farms has been increasing steadily, generation by generation. The farmers who spoke most positively about the dairy industry were generally the larger operators – with over 350 milking cows. Most farmers operating at this scale were in the 40–49 year age group or younger. Farm managers still work long hours, but they judge the rewards to be worth the effort:

'It was eight, nine, 10 years of pretty hard seasons. But we've still grown, from an equity point of view, really well... If I was to go back to [his previous skilled trade profession], I think dairying's probably a lot better, as far as that you can grow your assets fairly quickly' (Interview 13A, male, 40s).

Importance of Milk Price

Farm-gate milk price clearly emerges as a centrally importance governance mechanism:

'I think the valley is definitely suitable for dairy farming. There's no worries about doubling production, we just need the price. We can grow the grass and feed the cows to do it but unless there's a decent milk price it's not going to happen. That's about my bottom line' (Interview 10A, male, 40s).

A higher milk price is needed to make the industry more attractive to new entrants (and to children of farm families making career decisions), and to make the investment entailed in enterprise expansion attractive. Farmers therefore identify their milk company as the most important player in industry governance. In this particular Valley all farmers supply their milk to Murray Goulburn Co-operative, in which they are also shareholders; however, despite this enhanced structural position in the value chain they still consider themselves to be 'price takers' with their milk price ultimately set by the global dairy market.

Farming as a Business

Many interviewees spoke of the importance of taking a business management approach to farming:

'I couldn't run a dairy business without knowing its bottom line each year' (Interview 18A, female, 40s).

'Farming's a business now so the lifestyle, family tradition, I mean that's basically ending' (Interview 10A, male, 40s).

The extent to which interviewees incorporate formal business management practices and techniques in their farming varied significantly, but a number expressed the view that it is this business lens on farming that is the key to managing pressure on profitability:

'People don't look in their own back pocket and think how can they fix the problem or how can they make it better. It's easier for them to say 'Well, if the milk prices were better' (Interview 14A, female, 40s).

Ongoing Government Withdrawal

Concerning the role of government, people access the state government's Department of Environment and Primary Industries (DEPI) for particular specialist technical advice, or for guidance on regulations, but indicate that it does not project a generalized stewardship or proactive development responsibility towards the industry. The DEPI was undergoing a process of restructuring and job shedding as part of a wider state government austerity drive during the period that our interviews took place, yet no interviewees raised this as a point of concern. Dairy Australia by contrast is experienced by farmers as being very active in the provision of information and learning opportunities.

Family Land Use and Business Decisions Are Not in the Community Domain

Our interviews also explored the role of the local community as a governance actor. In discussing community sustainability, interviewees spoke about the fundamental importance of maintaining population, which they see as critical to maintaining services such as schools and to the viability of community organizations such as sporting clubs and volunteer-run emergency services. Younger families with school-age children are considered particularly desirable. In this view the value to communities of dairy farms is their affinity to younger families, which arises from their relative profitability (compared to other locally established agricultural land uses) and their strenuous workload, and also the additional employment that they generate. Our dairy farmer interviewees were overwhelmingly of the view that maintaining land in dairy production is positive for their community, and conversely are aware of the potential negative implications at the collective scale of multiple individual family land-use decisions that result in farms ceasing dairying. Nevertheless, without exception our interviewees agreed that landholders are entitled to make land-use and business decisions based on their own and their immediate families' interests, and should not be expected to make these decisions with community interests in mind:

'You could say it might be a little bit selfish, but... I don't think anyone would. You've got to think of your own situation in my eyes' (Interview 20A, male, 60s).

'If someone decides to retire from dairy and go into beef we say "Well, good on you, that's fine. You've milked cows for 25 years, 30 years, you've still

got plenty of life left in you and you don't want to get up at 4:30, 5:00 in the morning anymore, I don't blame you'" (Interview 15A, male, 40s).

For a dairy industry, or a community, interested in maintaining or expanding dairy farming the crucial question is what happens to dairy land when the current operators are ready to retire, and when there is no family 'successor'. At present transition into beef grazing, with its much lower management demands, is a common option. A small number of landholders are using other business models that maintain land in dairy production, while not requiring the sale of the land, including farm leasing, share-farming and employed farm managers; however, there is a common view that such models are prone to difficulties:

'I've known people who have leased out land and it can be a headache. If you get the right person on they're good as gold, but if you get someone that's, you know... I've seen farms run into the ground, and then the next person that comes to lease it, it's not worth the money that it was before. So there are pitfalls' (Interview 25A, male, 50s).

Our interviews suggest that milk price – the ability to generate a return on investment – is a necessary component of an enabling environment in which options for maintaining land in dairy production appear feasible and desirable. Other enabling factors include provision of information and advisory services to assist with the mechanics of farm business transitions, and brokering or matching services to bring land, people and investment together in workable combinations. Our interviewees identified industry organizations and milk factories as the actors best placed to provide services like these.

We now examine an example of industry-brokered collaboration on workforce issues, to examine how some of these roles play out in practice.

Governance in Action

The Australian dairy industry has recognized farmers' access to suitably skilled employees as an issue of concern for some years, and has been involved in many initiatives that have attempted to bring new people into the industry, particularly at the lower-skilled or 'entry' level (Nettle and Johnson, 2006). In this context, in mid-2006 Dairy Australia was approached by the Brotherhood of St Laurence (BSL), a large social justice-focused non-governmental organization, who wished to explore a possible fit between the dairy industry's need for workers and social welfare outcomes from getting unemployed people into interesting and supportive work. These tentative discussions led to a period of more than two years of planning of what would be required to create a pathway for disadvantaged job seekers into potentially ongoing employment in dairy farming. Late in this planning process the Victorian state government funded a feasibility study, which enabled this work to be captured in a project design document (Nettle et al., 2008). The rationale for government involvement included both the potential economic contribution of a more robust dairy industry, and the social welfare outcomes of placing unemployed people in work.

In early 2010 the western Victoria dairy region emerged as a suitable pilot site, and funding was secured from the Victorian government and a private philanthropic fund to trial the approach. The project was given the name 'In2Dairy'. In addition to the national-level partners Dairy Australia and the BSL, the local-level implement-

ing partners included WestVic Dairy (one of dairy Australia's regional development programmes), WestVic Staffing Solutions (a non-government provider of job market services), the National Centre for Dairy Education Australia (NCDEA – a specialist provider of vocational training for the dairy industry), and the University of Melbourne in an action research and evaluation role.

The Workforce Issue Bridges the Interests of Farmers, Industry and Government

The objectives of the project included: meeting real needs of farm employers for workers; placing disadvantaged jobseekers in potentially ongoing work; delivering accredited training to both employees and employers; being able to demonstrate impact and benefit at larger (both regional industry and local community) scale; and creating a model that could be replicated and financially sustained. The delivery of the project involved a complex array of activities on the part particularly of the local-level implementing partners. These included work associated with identifying and recruiting potential participants (both employers and employees), assessing training needs, delivering training, and pastoral care of employees throughout the process. Meanwhile the national partners focused on overall project design and monitoring, sourcing and acquitting funding and evaluation. Some of the work involved was performed as part of people and organizations' core funded activities, while other aspects were funded specifically by the In2Dairy pilot (Dairy Australia, 2010).

By May 2011, 42 participants had completed the pre-employment training, through three separate intakes, and three additional late recruits were placed without pre-employment training. From this pool, 26 trainees were placed in employment, and concurrently enrolled in accredited vocational training. Eighteen of these trainees attained the project goal of 16 weeks in employment, and 11 completed their vocational qualification. Four moved out of the industry on completion and one took up a share farming contract before completion and is now himself employing an assistant farmhand. Seven are still in employment on farms, and undertaking ongoing training. Social policy practitioners and researchers consider these rates of completion and retention to be higher than that achieved by many similar employment programmes (Perkins, 2008; Williamson, 2011).

Success Flowed from Complex Organizational Arrangements

Elsewhere we have argued that the success of the project resulted in part from the underlying ethical commitments of the collaborating partners (Nettle et al., 2010). Additionally, the combined national–local design in project implementation created a strong commitment to success, drawing on different expertise of organizations, and broad experience and wisdom:

'We were hoping the filtering [of entrants] and relationship building built in the design would mean most would stay once they went on farm' (National Dairy programme leader).

'Probably about 75% will stay' (National welfare agency).

In local delivery, different parts of the project provided validation and support to each others' efforts:

'Individual feedback from the course has been very positive' (Job services provider).

'[The effort trainers put in] lifts it to another level. When [participants] see you in the street they welcome you as a long-lost friend' (Trainer).

Central to the project delivery was the WestVic Dairy project manager who provided a 'go to' place that helped pull local activity together, and also sought new relationships to link the project to other dairy workforce and community needs. This included raising awareness amongst local government elected representatives about dairy industry workforce needs and opportunities, communicating about dairy farming careers to school students, and applying In2Dairy design features that had been developed for disadvantaged worker entrants to other potential 'career change' entrants, to meet industry needs for farm managers.

Success also depended on the willingness of farm employers to be involved. Some reported being motivated by desires to 'give back to the industry', or 'give people a chance in life', motivations that go beyond narrowly defined individual business goals (Nettle et al., 2010). The project steering committee took the view that if employers were willing to take the risk of employing previously unemployed, disadvantaged workers then industry partners should share this risk, hence the role of the project in providing pastoral care to employees. Subsequent developments indicate that industry and local community partners may need to do more to nurture and maintain the commitment of employers to social welfare, community and industry outcomes. A new source of employees became available in the form of young international travellers (backpackers) and some employers decided that this was a simpler and lower-risk short-term solution to their workforce needs than participating in collective workforce development initiatives.

The formal programme evaluation concluded that it is possible to operate a regional-scale farm workforce intervention that meets the needs of both jobseekers and employers, and that such programmes have the potential to create pathways into long-term careers in agriculture. The capacity to bring partners together largely rested in the national partner organizations – both operationally independent of government. They remained engaged in working in this area without specific funding to do so and it was ongoing conversations between two strategy-focused organizations that continued to refine ideas, bring together different groups from their respective domains and bring potential funding partners to the table. Action took place at the regional scale, requiring detailed local knowledge and relationships, thus demonstrating the importance of cross-scale linkages in governance arrangements.

Despite the project having met government expectations for 'job outcomes' in full, a change of state government in 2011 and different priorities meant that further government funding was not forthcoming. The steering committee looked at ways they could fund the In2Dairy approach without state funding and eventually were able to source dairy industry funds to initiate additional trainee intakes, but the specific targeting of socially disadvantaged jobseekers was not maintained. All the participating organizations maintain communication, and remain involved in dairy industry workforce development in the region, indicating the one-off investment by government has generated some sustained change in the institutional relationships connecting the dairy industry to the social welfare and employment services sectors.

The In2Dairy project focused on the supply of entry-level workers to the dairy industry, clearly only a small component of the overall farm workforce challenge.

Nevertheless the ability of the industry to design and deliver a successful response involving complex collaboration across policy domains and spatial scales demonstrates the potential for collaboration and innovation that exists in complex governance arrangements such as those that exist in Australian agriculture.

Discussion

The results of our three study components highlight some key features of agricultural industry governance in Australia, as they play out in the farm workforce area. The Victorian government's treatment of the issue, as revealed in the RRC Report and Response, remains firmly grounded in neo-liberalism. Farms are to be understood as businesses, and farmers are expected to deploy business management skills to maintain profitability. This is a strongly individualizing policy discourse (Cheshire and Lawrence, 2005a), which, while acknowledging the structural causes of many of the pressures on farm viability, maintains that they are simply part of the operating context that farmers must learn to manage. The propensity of this discourse to blame farmers for circumstances that are beyond their control has been noted by others (Halpin and Guifoyle, 2004; Gill, 2011). Nevertheless the 'farming as a business' framing is embraced by many of the farmers we interviewed. On this basis, some farm families are concluding apparently that if farming is a business, then it is not one that is sufficiently rewarding to justify further investment. The slow decline in the number of dairy farms in the valley we studied can thus be seen as a logical outcome of market-led industry governance intersecting with individualist economic rationality.

By asking the question 'why would people choose a career in agriculture', the farm workforce lens thus reveals that neo-liberal governmentality creates vulnerability for government too. The new focus on farm workforce can be seen as a recognition by government that the existence of agricultural industries cannot be taken entirely for granted. This is framed by government as an innovation challenge, and the emerging policy and action around farm workforce can be seen as the latest iteration of government and industry mobilization around the 'get big or get out' imperative that has informed agricultural policy design for several decades (Higgins and Lockie, 2001). The workforce lens highlights aspects of this challenge in greater detail: new business models are needed, farmers need to become better employers, new types of mentoring, networking and opportunity brokering are required, and government positions agricultural industries as the lead actor to drive this innovation. The RRC inquiry is itself an activity of governing through governance: of mobilizing networks, particularly across the government–industry boundary. The role government sees for itself emerges clearly as 'identifying stakeholders and then developing the relevant opportunities and linkages for them to be brought together to act for themselves' (Goodwin, 1998, p. 9).

We have presented evidence that the dairy industry possesses the institutional capacity to engage in complex collaboration for innovation of the type envisaged by government. Dairy Australia is positioned exactly in the zone of 'blurred boundaries' (Stoker, 1998) between government, private industry and individual farm businesses, and this positioning has enabled it to develop practices that reach into each of these domains to create practical responses to issues (Nettle et al., 2013). We note here that the dairy industry has a long history of working cooperatively (Paine and Nettle, 2008), and partly as a consequence of this has a relatively well-resourced

industry research and development corporation. It cannot be assumed that our findings about the capacity of the dairy industry to engage in complex innovation processes hold for all agricultural industries in Australia. However, the broader finding, about the potential of diffused governance arrangements to create such capacity, is still sound.

In keeping with the theme of this special issue, our particular concern though is with how the interests of rural communities are accounted for. Our study supports other findings that farmers value their local communities highly, and understand their role in local economies (Pritchard et al., 2011; McManus et al., 2012). Yet we found a clear delineation between the sphere of individual family decision-making about land use and livelihood, and the sphere of community. While this is not a point that we explored specifically, we suspect that this is not a recent phenomenon that can be attributed to neo-liberal governmentality, but likely has much deeper roots in Australia's private property system and European settlement history. This delineation is significant in the context of the continued assertion by government of the responsibility of rural communities to plan and act for their own future (Cheshire, 2006), suggesting that planning and action on the part of communities has a limited ability to reach into farm family decision-making, and thus that 'community' cannot be relied upon as a governance actor to take primary stewardship of agricultural industries.

Conversely, it seems ill-advised to expect agricultural industries to take responsibility for rural communities' economic and social sustainability, since such a role takes them beyond their proximate interests. Given government interest in agricultural industry growth, and its recognition of the importance of 'regional liveability' as an enabling context for such growth, we argue that the farm workforce issue is one of clearly shared interest between government, industry and communities, and this represents an opportunity for collaboration. The particular resonance of farm workforce within a neo-liberal policy discourse is its individualistic character. A focus on farm workforce makes it clear that the persistence of agricultural industries in the end depends on individuals' willingness to choose it as a career, and to invest.

Conclusion

The cost-price squeeze on farm profitability looks set to continue, and will continue to provide impetus towards both expansion and intensification of farm businesses. The new policy focus on farm workforce in Australia is clearly framed within the existing neo-liberal policy commitment, and offers no new remedy for these pressures, or their flow-on effects for rural communities. However, following Lockie and Higgins (2007) and Dibden and Cocklin (2010), we argue that neo-liberalism is a work in progress, subject to adjustment and negotiation, and that farm workforce presents itself as a new dilemma, opening new terrain on which such negotiation can occur. As we have shown it is terrain that can accommodate particular types of action on the part of collective actors in agricultural industries, communities and governments, which offer scope to assist communities in their ongoing efforts to sustain themselves in a competitive world. Capitalizing on this scope may require new mechanisms whereby farmers and communities can explore and act on their entwined interests. It will certainly require greater recognition from government and industry of the essential role of community as a stakeholder in agricultural industry development, with needs that are distinct from those of individual farm businesses.

Notes

1. Census statistics on the age of farm owners can be misleading; however, as intergenerational transfer of operational responsibility for the farm may take place some time before legal ownership is transferred.
2. Australia's federal system involves three tiers of government: federal, state and local. While the federal government is a major investor in agricultural research and development, it is state governments that have primary responsibility for service delivery.
3. There are 39 recommendations in total, but two relate specifically to the marine fishing industry and are not considered here.

References

- AFI (AUSTRALIAN FARM INSTITUTE) (2005) *Australian Farm Sector Demography: Analysis of Current Trends and Future Farm Policy Implications*. Surry Hills: Australian Farm Institute.
- ALSTON, M. (2004) Who is down on the farm? Social aspects of Australian agriculture in the 21st century, *Agriculture and Human Values*, 21(1), pp. 37–46.
- AUCLAIR, E. and VANONI, D. (2003) The attractiveness of rural areas for young people, in: B. JENTSCH and M. SHUCKSMITH (eds) *Young People in Rural Areas of Europe*. Aldershot: Ashgate, pp. 74–104
- BARR, N. (2004) *The Micro-Dynamics of Change in Australian Agriculture 1976–2001*. Canberra: Australian Bureau of Statistics.
- BARR, N. (2009) *The House on the Hill: The Transformation of Australia's Farming Communities*. Canberra: Land and Water Australia.
- BARR, N., KARUNARATNE, K. and WILKINSON, R. (2005) *Australia's Farmers: Past, Present and Future*. Canberra: Land and Water Australia.
- BEILIN, R., HILL, S. and SYSAK, T. (2011) Where is the coherent response to climate change and peak oil? An examination of policy and practice affecting agriculture in regional Australia, *International Journal of Sociology of Agriculture and Food*, 18(3), pp. 199–216.
- BURCH, D. and LAWRENCE, G. (2005) Supermarket own brands, supply chains and the transformation of the agri-food system, *International Journal of Sociology of Agriculture and Food*, 13(1), pp. 1–18.
- CHESHIRE, L. (2006) *Governing Rural Development: Discourses and Practices of Self-help in Australian Rural Policy*. Aldershot: Ashgate.
- CHESHIRE, L. and LAWRENCE, G. (2005a) Neoliberalism, individualisation and community: regional restructuring in Australia, *Social Identities*, 11(5), pp. 435–445.
- CHESHIRE, L. and LAWRENCE, G. (2005b) Re-shaping the state: global/local networks of association and the governing of agricultural production, in: V. HIGGINS and G. LAWRENCE (eds) *Agricultural Governance: Globalization and the New Politics of Regulation*. Abingdon: Routledge, pp. 35–49.
- CHESHIRE, L., HIGGINS, V. and LAWRENCE, G. (2007) Rural governance and power relations: theorizing the complexity of state-citizen interactions, in: L. CHESHIRE, V. HIGGINS and G. LAWRENCE (eds) *Rural Governance: International Perspectives*. Abingdon: Routledge, pp. 291–303.
- COCKLIN, C. and DIBDEN, J. (2002) Taking stock: farmers' reflections on the deregulation of Australian dairying, *Australian Geographer*, 33(1), pp. 29–42.
- COCKLIN, C. and DIBDEN, J. (eds) (2005) *Sustainability and Change in Rural Australia*. Sydney: University of New South Wales Press.
- COMMONWEALTH OF AUSTRALIA (2007) *Skills: Rural Australia's Need: Inquiry into Rural Skills Training and Research*. Canberra: Commonwealth of Australia.
- CRIBB, J. (2010) *The Coming Famine: The Global Food Crisis and What We Can Do to Avoid It*. Collingwood: CSIRO Publishing.
- CUERVO, H. and WYN, J. (2012) *Young People Making It Work*. Melbourne: Melbourne University Press.
- DAIRY AUSTRALIA (2010) *In2Dairy Assistant Farmhand Program – Western Victoria: Business Plan March 2010 to June 2011*. Melbourne: Dairy Australia.
- DAIRY AUSTRALIA (2011) *2011 Dairy People Factfinder*. Melbourne: Dairy Australia.
- DAIRY AUSTRALIA (2013a) *Dairy 2013 Situation and Outlook*. Melbourne: Dairy Australia.
- DAIRY AUSTRALIA (2013b) *Farmgate Milk Price*. Published online <<http://www.dairyaustralia.com.au/Statistics-and-markets/Prices/Farmgate-Prices.aspx>>, accessed 9 July 2013.
- DIBDEN, J. and COCKLIN, C. (2010) Re-mapping regulatory space: the new governance of Australian dairying, *Geoforum*, 41(3), pp. 410–422.
- DIBDEN, J., POTTER, C. and COCKLIN, C. (2009) Contesting the neoliberal project for agriculture: productivist and multifunctional trajectories in the European Union and Australia, *Journal of Rural Studies*, 25(3), pp. 299–308.

- FARMAR-BOWERS, Q., HIGGINS, V. and MILLAR, J. (eds) (2013) *Food Security in Australia: Challenges and Prospects for the Future*. New York: Springer.
- FOUCAULT, M. (1991) Governmentality, in: G. BURCHELL, C. GORDON and P. MILLER (eds) *The Foucault Effect: Studies in Governmentality*. Chicago: University of Chicago Press, pp. 87–104.
- GARNAUT, J. and LIM-APPLEGATE, H. (1998) *People in Farming*, ABARE Research Report 98.6. Canberra: Australian Bureau of Agricultural and Resource Economics.
- GILL, F. (2011) Responsible agents: responsibility and the changing relationship between farmers and the state, *Rural Society*, 20(2), pp. 128–141.
- GOODWIN, M. (1998) The governance of rural areas: some emerging research issues and agendas, *Journal of Rural Studies*, 14(1), pp. 5–12.
- GRAY, D. (2012) *Double Agricultural Output: Minister*. Published online <<http://www.theage.com.au/victoria/double-agricultural-output-minister-20120520-1yz2m.html>>, accessed 18 February 2013.
- GRAY, I. and LAWRENCE, G. (2001) *A Future for Regional Australia: Escaping Global Misfortune*. Cambridge: Cambridge University Press.
- GRIFFIN, L. (2012) Where is power in governance? Why geography matters in the theory of governance, *Political Studies Review*, 10(2), pp. 208–220.
- HALPIN, D. and GUIFOYLE, A. (2004) Attributions of responsibility: rural neoliberalism and farmers' explanations of the Australian rural crisis, *Rural Society*, 14(2), pp. 93–110.
- HATTERSLEY, L., ISAACS, B. and BURCH, D. (2013) Supermarket power, own-labels, and manufacturer counterstrategies: international relations of cooperation and competition in the fruit canning industry, *Agriculture and Human Values*, 30(2), pp. 225–233.
- HIGGINS, V. (2002) *Constructing Reform: Economic Expertise and the Governing of Agricultural Change in Australia*. Hauppauge, N.Y.: Nova Science Publishers.
- HIGGINS, V. (2005) Governing agriculture through the managerial capacity of farmers: the role of calculation, in: V. HIGGINS and G. LAWRENCE (eds) *Agricultural Governance: Globalization and the New Politics of Regulation*. Abingdon: Routledge, pp. 118–132.
- HIGGINS, V. and LAWRENCE, G. (2005) Introduction: globalization and agricultural governance, in: V. HIGGINS and G. LAWRENCE (eds) *Agricultural Governance: Globalization and the New Politics of Regulation*. Abingdon: Routledge, pp. 1–15.
- HIGGINS, V. and LOCKIE, S. (2001) Getting big and getting out: government policy, self-reliance and farm adjustment, in: S. LOCKIE and L. BOURKE (eds) *Ruralty Bites: The Social and Environmental Transformation of Rural Australia*. Annandale: Pluto Press, pp. 178–190.
- HIGGINS, V., DIBDEN, J. and COCKLIN, C. (2008) Neoliberalism and natural resource management: agri-environmental standards and the governing of farming practices, *Geoforum*, 39(5), pp. 1776–1785.
- HOCHMAN, Z., CARBERRY, P.S., ROBERTSON, M.J., GAYDON, D.S., BELL, L.W. and MCINTOSH, P.C. (2013) Prospects for ecological intensification of Australian agriculture, *European Journal of Agronomy*, 44, pp. 109–123.
- HUNT, W., BIRCH, C., COUTTS, J. and VANCLAY, F. (2012) The many turnings of agricultural extension in Australia, *Journal of Agricultural Education and Extension*, 18(1), pp. 9–26.
- LAW, J. and HASSARD, J. (eds) (1999) *Actor Network Theory and After*. Oxford: Blackwell Publishers.
- LAWRENCE, G.A. (1987) *Capitalism and the Countryside: The Rural Crisis in Australia*. Sydney: Pluto Press.
- LAWRENCE, G., RICHARDS, C. and LYONS, K. (2012) Food security in Australia in an era of neoliberalism, productivism and climate change, *Journal of Rural Studies*, 29, pp. 30–39.
- LINEHAN, V., THORPE, S., ANDREWS, N., KIM, Y. and BEAINI, F. (2012) *Food Demand to 2050: Opportunities for Australian Agriculture*. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences.
- LOCKIE, S. (2009) Agricultural biodiversity and neoliberal regimes of agri-environmental governance in Australia, *Current Sociology*, 57(3), pp. 407–426.
- LOCKIE, S. and HIGGINS, V. (2007) Roll-out neoliberalism and hybrid practices of regulation in Australian agri-environmental governance, *Journal of Rural Studies*, 23(1), pp. 1–11.
- MCMANUS, P., WALMSLEY, J., ARGENT, N., BAUM, S., BOURKE, L., MARTIN, J., PRITCHARD, B. and SORENSEN, T. (2012) Rural community and rural resilience: what is important to farmers in keeping their country towns alive?, *Journal of Rural Studies*, 28(1), pp. 20–29.
- NETTLE, R. and JOHNSON, R. (2006) *A Review of Employment Projects in the Australian Dairy Industry 1998–2006*. Melbourne: University of Melbourne.
- NETTLE, R., OLIVER, D., BRIGHTLING, P., BUCHANAN, J. and WILLIAMSON, J. (2008) From 'workforce planning' to 'collective action': developments in the Australian dairy farm sector, *Employment Relations Record*, 8(1), p. 17–33.
- NETTLE, R., BRIGHTLING, P. and WILLIAMSON, J. (2010) Building capacity in collective action: learning from dairy industry workforce planning and action in Australia, in: I. DARNHOFFER and M. GRÖTZER (eds) *Building Sustainable Rural Futures: The Added Value of Systems Approaches in Times of Change and Uncertainty*. Vienna: University of Natural Resources and Applied Life Sciences.

- NETTLE, R., BRIGHTLING, P. and HOPE, A. (2013) How programme teams progress agricultural innovation in the Australian dairy industry, *Journal of Agricultural Education and Extension*, 19(3), pp. 271–290.
- OLDRUP, H. (1999) Women working off the farm: reconstructing gender identity in Danish agriculture, *Sociologia Ruralis*, 39(3), pp. 343–358.
- PAINÉ, M. and NETTLE, R. (2008) Collaboration in action: the dairy moving forward response to drought, in: B. DEDIEU and S. ZASSER-BEDOYA (eds) *Empowerment of the Rural Actors: A Renewal of Farming Systems Perspectives*. Clermont Ferrand: INRA SAD.
- PARENT, D. (2012) Social isolation among young farmers in Quebec, Canada, in: *Producing and Reproducing Farming Systems: New Modes of Organisation for Sustainable Food Systems of Tomorrow*, Proceedings of 10th European IFSA Symposium, Aarhus, 1–4 July.
- PEINE, E. and McMICHAEL, P. (2005) Globalization and global governance, in: V. HIGGINS and G. LAWRENCE (eds) *Agricultural Governance: Globalization and the New Politics of Regulation*. Abingdon: Routledge, pp. 19–34.
- PERKINS, D. (2008) Improving employment participation for welfare recipients facing personal barriers, *Social Policy and Society*, 7(1), pp. 13–26.
- PLOEG, J.D. VAN DER (2008) *The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*. London: Earthscan.
- PRITCHARD, B. (2005a) Implementing and maintaining neoliberal agriculture in Australia. Part 1: Constructing neoliberalism as a vision for agricultural policy, *International Journal of Sociology of Agriculture and Food*, 13(1), pp. 1–12.
- PRITCHARD, B. (2005b) Unpacking the neoliberal approach to regional policy: a close reading of John Freebairn's 'Economic Policy for Rural and Regional Australia', *Geographical Research*, 43(1), pp. 103–112.
- PRITCHARD, B., ARGENT, N., BAUM, S., BOURKE, L., MARTIN, J., McMANUS, P., SORENSEN, A. and WALMSLEY, J. (2011) Local – if possible: how the spatial networking of economic relations amongst farm enterprises aids small town survival in rural Australia, *Regional Studies*, 46(4), pp. 539–557.
- RHODES, R.A.W. (1997) *Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability*. Maidenhead: Open University Press.
- RHODES, R.A.W. (2007) Understanding governance: ten years on, *Organization Studies*, 28(8), pp. 1243–1264.
- ROSE, N. and MILLER, P. (1992) Political power beyond the state: problematics of government, *British Journal of Sociology*, 43(2), pp. 173–205.
- ROSIN, C.J., STOCK, P. and CAMPBELL, H. (eds) (2012) *Food Systems Failure: The Global Food Crisis and the Future of Agriculture*. New York: Earthscan.
- RRC (RURAL AND REGIONAL COMMITTEE) (2012) *Inquiry into the Capacity of the Farming Sector to Attract and Retain Young farmers and Respond to an Ageing Workforce, Final Report*. Melbourne: Rural and Regional Committee, Parliament of Victoria.
- SANTHANAM-MARTIN, M. and NETTLE, R. (2012) *Will Farm Leasing Change Rural Communities?: Farming Practices and Community Sustainability Implications in an Australian Dairy Region*. Published online <http://ifsa2012.dk/?page_id=764>, accessed 6 November 2012.
- SCOPELIANOS, S. (2013) *Coles' Milk Cartoon Attacked*. Published online <http://www.weeklytimesnow.com.au/article/2013/02/11/559609_dairy.html>, accessed 12 February 2013.
- SMYTH, P., REDDEL, T. and JONES, A. (eds) (2005) *Community and Local Governance in Australia*. Sydney: University of New South Wales Press.
- STATE OF VICTORIA (2013) *Dairy Industry Profile*. Published online <<http://www.dpi.vic.gov.au/agriculture/dairy/dairy-industry-profile>>, accessed 9 July 2013.
- STAYNER, R. and REEVE, I. (1990) *Uncoupling: Relationships between Agriculture and the Local Economies of Rural Areas in New South Wales*. Armidale: Rural Development Centre, University of New England.
- STEHLIK, D. (2009) Intergenerational transitions in rural Western Australia: an issue for sustainability?, in: F. MERLAN and D. RAFTERY (eds) *Tracking Rural Change: Community, Policy and Technology in Australia, New Zealand and Europe*. Canberra: Australian National University, pp. 135–150.
- STOKER, G. (1998) Governance as theory: five propositions, *International Social Science Journal*, 50(155), pp. 17–28.
- TERRIER, M., MADELRIEUX, S. and DEDIEU, B. (2012) Understanding the diversity of farm pathways as a co-evolution between the family organization and the farming system, in: *Producing and Reproducing Farming Systems: New Modes of Organisation for Sustainable Food Systems of Tomorrow*, Proceedings of 10th European IFSA Symposium, Aarhus, 1–4 July.
- TILZEY, M. (2006) Neo-liberalism, the WTO and new modes of agri-environmental governance in the European Union, the USA and Australia, *International Journal of Sociology of Agriculture and Food*, 14(1), pp. 1–28.
- VICTORIAN GOVERNMENT (2011) *Inquiry into the Capacity of the Farming Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce: Submission from the Victorian Government*. Melbourne: Victorian Government.

- VICTORIAN GOVERNMENT (2012) *Victorian Government Response to the Rural and Regional Committee Inquiry into the Capacity of the Farming Sector to Attract and Retain Young Farmers and Respond to an Ageing Workforce*. Published online <<http://www.parliament.vic.gov.au/rrc/inquiries/article/1432>>, accessed 30 May 2013.
- WHEELER, S., BJORNLUND, H., ZUO, A. and EDWARDS, J. (2012) Handing down the farm? The increasing uncertainty of irrigated farm succession in Australia, *Journal of Rural Studies*, 28(3), pp. 266–275.
- WILLIAMSON, J. (2011) New welfare implications of a capability based approach to reconnecting high disadvantage job seekers to the mainstream economy, in: *Proceedings of New Directions in Welfare Congress*, Paris, 3–5 July.