Production under GlobalGAP: a case study from an Australian citrus cooperative

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Production under GlobalGAP: a case study from an Australian citrus cooperative.

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Declaration

The research and discussion presented in this thesis are the original work of the author and has not been submitted at any tertiary institute or university for any other award.

Any material with has been presented by any person or institute is duly referenced, and a complete list of all references is presented in the bibliography.

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Abstract

Private food standards are an increasingly important regulatory mechanism in the agri-food system. Driven by quality demands of consumers, high profile food scares, changes to the legislative requirements of retailers and increasing risk in global supply chains, retailers are frequently involved in the development of private food standards, and their enforcement along supply chains. This new role for retailers as de facto gate keepers for quality and production processes points to an increase in power of this group.

Regulation theory provides a useful perspective from which to contextualise the economic and regulatory changes that have created an environment in which retailers have both the incentive, and the ability, to impose their requirements throughout the supply chain. This theory suggests that the neo-liberal agendas pursued by many developed nations have not led to a deregulation of production but have created space for re-regulation which has been taken up by global organisations attempting to remain profitable and grow in a highly competitive operating environment. While there is a great deal of enquiry regarding the limitations and opportunities these private standards create for marginal farmers, little has been revealed about the ways in which those producers based in developed countries have been affected. The actor approach provides a framework for the consideration of producers, empowering them and positing that they are not passive recipients of the changes occurring around them.

This thesis examines how the development of GlobalGAP, a private food standard developed by a consortium of many of Europe's largest retailing chains, shaped the production relations of an Australian Citrus producers cooperative. The hypothesis at the heart of this study is that while GlobalGAP may be evidence for a strengthening of the market power of retailers, as well as a mechanism through which retailers can reassert this market power to downstream supply chain actors, producers will have nuanced and varying responses. This suggests that although some producers may be unwilling or unable to certify to the standard, others will successfully negotiate GlobalGAP and incorporate its' requirements in standard business practice. Those that do may benefit from doing so through, for example, increased market access or more streamlined business practices.

An Australian citrus cooperative, Gayndah Packers, was selected as a case study, and semi-structured interviews were conducted with almost two thirds of the members. Respondents did not attribute certification to GlobalGAP with significant changes to their production processes, although certification did necessitate a substantial increase in administration. The lack of change in production processes raises questions as to the benefits attainable through the inclusion of social and environmental goals in GlobalGAP, although it was suggested that the history of the Cooperative of certification to other production standards, as well as increasing requirements of governments on producers, helped to align the practices of Cooperative members with the requirements for GlobalGAP certification. Nonetheless, GlobalGAP certification was sufficiently difficult that it led to the attrition of several members of the Cooperative, and many of those remaining suggested that without the support offered by the Cooperative to its members they may have been unable to attain GlobalGAP certification. This research did find evidence to suggest that aspects of the retailer-producer relationship, such as the distance between farm-gate and market, left producers open to manipulation. In sum, there was limited benefit to producers in GlobalGAP certification. However the requirement of GlobalGAP certification for the diversification of market access was significant for producers, and had led to changes at the Cooperative level and more broadly within the supply chain.

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Table of Acronyms

BMCL	Benchmarking Cross Reference Checklist
BRC	British Retail Consortium
BSE	Bovine Spongiform Encephalopathy
CAC	Codex Alimentarius Commission
CB	Certification Body
CBC	Certification Body Committee
CL	Checklists
CPCC	Control Points and Compliance Criteria
DAFF	Department of Agriculture, Fisheries and Forestry
DPI	Department of Primary Industries and Fisheries
EPQA	Emerald Pest Quarantine Area
EU	European Union
EurepGAP	Euro-Retailer Produce Working Group for Good Agricultural Practices
FAO	Food and Agriculture Organisation
FGQMS	Farmer Group Quality Management System
FSANZ	Food Standards Australia and New Zealand
GAP	Good Agricultural Practices
GATT	General Agreement on Tariffs and Trade
GIS	Geographic Information System
GlobalGAP	Global Good Agricultural Practice

GR	General Regulations
HACCP	Hazard Analysis and Critical Control Points
HAL	Horticulture Australia Limited
ICM	Integrated Crop Management
IMF	International Monetary Fund
IPM	Integrated Pest Management
ISO	International Organisation for Standardisation
L&WMP	Land and Water Management Plan
NFIS	National Food Industry Strategy
NRM	Department of Natural Resources
NTWG	National Technical Working Group
OHS	Occupational Health and Safety
SC	Sector Committees
TNC	Transnational Corporation
TPC	Third party Certification
UNIDO	United Nations Industrial Development Organisation
WHO	World Health Organisation
WQA	Woolworths Quality Assured
WTO	World Trade Organisation

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1 Introduction

1.1 Rethinking the Agrarian Question

Over 100 years ago, Kautsky in his seminal work, *The Agrarian Question*, introduced what later became a focal point for political economists, geographers, sociologists and other commentators on rural society; namely, does the spread of agricultural capitalism lead to the expropriation of land from the peasant class, or does it lead to strengthening of the peasant class? Fast forward over one hundred years, and the same question can be asked, albeit in slightly different ways. That is, does the spread of trade liberalisation and neo-liberal economic agendas, under the auspices of capitalism, lead to a relinquishment of farmer control over production processes? Does it promote a strengthening of this group? Or, is some kind of intermediate path more likely? There are similarities between the period in time in which Kautsky's question was poised, and the current day. Watts and Goodman (1997) pointed out a decade ago that at the time of Kautsky's work agriculture was facing growth and integration of a 'global' market driven by increasing frontiers of leading economies, changing tastes, advances in shipping technologies and an inability to match demand with supply. Producers today face global market demands characterised in many cases by consumer concerns about safety and quality, increasingly global markets and technological advances. Questions resound again as to producers' loss of power through neo-liberal governance and associated trends, and there currently rages a debate of considerable importance about private sector participation in the regulation of agri-food systems. Recently, much ado has been made about removing 'inefficient' government intervention in markets and allowing 'rational' markets to allocate resources more effectively. While the extent of government intervention in markets is contested (Raikes, Ponte and Jensen, 2000; Tickell and Peck, 2003), private forms of regulation operating at a supra-national level have arisen nevertheless and are an increasingly important regulatory mechanism in the global agri-food system. It has been argued that these have the potential to be of equal or greater consequence than government regulations (Havinga, 2006).

Burch and Lawrence (2004) suggest preconditions for the development of private standards began in the US and Europe from the 1960s onwards. Established due to financial duress from the Second World War, the General Agreement on Tariffs and Trade and the International Monetary Fund laid the theoretical groundwork for the growth of transnational corporations. The increasing power of global entities such as the World Trade Organisation, and the subsequent decline in influence of the nation-state, together provided favourable conditions for horizontal consolidation within the retailing sector. Competing in an oligopolistic market, private standards provided retailers with a means through which to minimise risks associated with the coordination of supply chains at an international level while underwriting quality, responding to consumer concerns about food safety and meeting increasingly demanding legal requirements. In contrast to earlier processor-driven agri-food systems, today the production and consumption of food is dominated by food companies and retailers that operate global supply chains and offer a future of 'private global regulation' (Friedmann, 1993:52) to protect transnational interests. Privately developed food standards, a core element of global supply chains, often go well beyond food safety standards to define production processes, including a range of seemingly commendable parameters such as worker health and safety, animal welfare and environmental management. Growing quantities of food are produced under these standards, which are becoming so pervasive that several authors have suggested they have become the predominant driver of the agri-food system (Hatanaka, Bain and Busch, 2005; Henson and Hooker, 2001; Henson and Reardon, 2005). The development of private standards is associated with significant implications for producers who, without the appropriate certification, are unable to access markets in which these standards apply (Henson, 2006; Kleinwechter and Grethe, 2006; Mather, 2004; Van der Meer, 2006).

GlobalGAP is just one of these private standards. Developed in 1999 under the name EurepGAP to mitigate growing risks for the retailing sector, allay consumer concern and respond to government legislation, GlobalGAP aims to ensure agricultural production is undertaken in a "responsible way that respects food safety, the environment, workers welfare and the welfare of animals" (Eurep, 2008a). The standard is noteworthy for its aim to integrate pre-existing European retailer standards. In this way, it is quite different from many retailer developed food

production standards that are used as mechanism for competition between retailers. Mandatory for access to markets dominated by many of the world's largest and most powerful retailing chains, GlobalGAP has experienced extraordinary growth in membership and geographical reach. As a business-to-business standard that remains invisible to consumers and does not attract a price premium for producers, commentators have raised concerns about the extent to which GlobalGAP represents a shift in power to large retailing organisations, which, through GlobalGAP, act as gatekeepers to key European markets. At the same time, producers participating in these global supply chains are less able to determine the terms and conditions of production as the emphasis on prescriptive, uniform standards deepens. While there is evidence to suggest that some producers may be successfully incorporated into these supply chains, others, especially those in the developing world may become marginalised if they are excluded from high value markets.

Bearing this in mind, this thesis considers the ways in which producers in Australia are impacted by GlobalGAP. From a regulation theory perspective, it examines the global economic restructuring that has encouraged the development of transnational supply chains necessitating, at least from the view of global retailing giants, the development and enforcement of private standards. Within this examination, the primary focus is on GlobalGAP, which is expressly intended to integrate private and public food standards at a global level and minimise detrimental environmental and social impacts of food production. Regulation theory is useful for understanding the global changes resulting from the onslaught of private standards. This will be complemented by the actor-oriented approach, developed by Norman Long, which gives a framework through which to consider the implications and responses to private standards from the point of view of food producers. There are a good many trends seen in agriculture that point to nuanced responses to structural change; the resurgence of family farms in advanced capitalism (Roberts, 1996); localisation of food production in an era of globalisation (Cowell and Parkinson, 2003) and the trends for both food differentiation and food standardisation (Hatanaka, Bain and Busch, 2006). These examples resonate with a key notion of the actor-oriented approach, which posits that "different social patterns develop within the same structural circumstances" (Long, 2001: 44). Thus, it is this approach that is adopted to consider the ways in which producers from

an Australian citrus producers cooperative negotiate GlobalGAP at a local level. The hypothesis of this study is that while GlobalGAP may be evidence for a strengthening of the market power of retailers, as well as a mechanism through which retailers can impose this power on downstream supply chain actors, producers responses will be nuanced and varied. Thus, while some producers may be unable or unwilling to continue farming, others will cope with structural change and will "actively strategise in terms of their own projects" (Long, 2001:44).

Selection of a producer group in the citrus industry to test this hypothesis is reflective of several key points. First, it was contended that a large producer group would have more muted impacts from GlobalGAP certification due to informal support networks and a greater level of negotiating power with retailers than individual producers. Therefore, issues arising from certification would be relevant for many producers. Second, the Australian citrus industry is one that in recent years has been forced to adapt to change, having been subjected to government reform that resulted in competition from new international markets, and suffering a disease outbreak that threatened the future of key production regions in Australia. Therefore, producers would be likely to be somewhat resilient to change, and the impacts found by this study would be reflective of GlobalGAP certification rather than industry change. The final selection of Gayndah Packers as the producer group for this study was a practical choice. At the time of commencing this study there were few producer groups in Australia that had certified to GlobalGAP, and unlike Gayndah Packers, many of those that had done so had previously participated in industry and academic studies.

1.2 Producers within the standards literature

There are a small number of studies on the implications of private standards for producers, and with a few exceptions, (Du Toit, 2002; Ortiz and Aparicio, 2007) the actor approach has not been applied within this literature. Many producer focussed studies on GlobalGAP are based in the developing world, where the potential for exclusion of marginalised producers from international markets is a key area of enquiry (García Martinez and Poole, 2004; Graffham, Karehu and MacGregor, 2006; Humphrey, 2008; Jaffee and Masakure, 2005; Kleinwechter and Grethe, 2006;

Mausch et al, 2006). These studies are useful for understanding why and how marginalised producers certify to standards, and the barriers to their doing so. However the implications, benefits and hurdles in certification for these producers are potentially quite different to those in the developed world due to the vastly different economies of scale under which the majority of producers operate. This suggests that producers in developing countries will experience negative impacts more acutely, meaning many of the implications from these studies may not be relevant for Australian producers. Outside of the developing world, other research on GlobalGAP focuses largely on what it infers about the future of regulation and governance within the agri-food system (Campbell, 2005; Dolan and Humphrey, 2004; Hatanaka, Busch and Bain, 2005; Konefal et al, 2005; Van der Grijp et al, 2005). Of the producer focussed studies that have been undertaken on GlobalGAP, many found differential effects within groups of producers certifying to the same standard (Cao et al, 2004; Hatanaka, Busch and Bain, 2005; Mather and Greenberg, 2003; Siebert et al, 2000). This lends some weight to the notion that actors interact and strategise differently as standards become part of their worlds.

Studies on producer implications of certification in developing countries have found several non-financial benefits for smaller producers certifying to private standards. For example, Hatanaka, Bain and Busch (2005) reported in their Ghanaian research that certification to GlobalGAP helped farmers improve management to produce higher quality fruit and vegetables that met international quality and safety standards. This was associated with increased pride and prestige for producers within their communities. Other studies have suggested that certification to private standards may be associated with financial gains for producers through, for example, operational efficiencies from planning and managing the end-to-end production process, streamlining business practices, and reducing inefficiencies in the use of inputs (Nganje and Mazzocco, 2000). Competitive advantage and increased market share have also contributed to financial gains for producers (Cao et al, 2004; Hatanaka, Bain, & Busch, 2005).

However, as certification becomes a requirement for market entry rather a means to gain a competitive edge certified producers are less likely to make these gains (Hatanaka, Bain and Busch, 2005; Henson and Reardon, 2005). Furthermore, certification to private standards increases production costs due to auditing expenses and the changes required to meet minimum

requirements set by the applicable standard (Bennett, 2005; Hatanaka, Bain and Busch, 2005; Reardon and Farina, 2001). That many private standards, including GlobalGAP, are not associated with a price premium suggests that certification is likely to add to a mounting cost-price squeeze for producers. Although certification impacts for large producers are not well documented, it is possible that the potential range of implications for these producers, who are more likely to have the technical and financial capital to gain certification, is less severe than for smaller producers, and producers who can afford to make the necessary changes will have a wider range of marketing options.

In some cases, certification to private standards has led to a restructuring of markets and their associated supply chains. Farina (2002) proposed that the existence of small-scale fringe retailers, who operate alongside core retailers but are not kept to the same quality standard, may provide an opportunity for small numbers of non-certified producers to remain in the market. In this instance, one market is dominated by high quality, highly priced, certified produce, the other by apparently lesser quality, inexpensive produce. Though evidence exists of large retailers that usually purchase only certified produce continuing to trade with non-certified producers (Henson and Reardon, 2005), this is less likely to occur as growing numbers of producers are certified. In this way, producers are a vital key in the legitimisation of private standards. As Ransom (2007) points out, if the retailers behind GlobalGAP for example were unable to source sufficient quantities of certified produce, the legitimacy of the standard would be compromised.

The requirement for certification to private standards may also promote consolidation between producers as a way of reducing transaction costs, achieving economies of scale, or attempting to overcome mistreatment by powerful standards setting organisations (Busch and Bain, 2004; Hatanaka, Bain and Busch, 2005). For example, in the United States, a group of blueberry producers established two processing cooperatives to share the substantial financial burden they were faced with as a result of certification (Reardon et al, 2003), suggesting that producers are developing strategic responses to the actions of retailers. Busch and Bain (2004) cite successful examples of producers from farm to firm level forming global alliances to offer a year-round supply of produce, effectively competing with other producers for supply contracts. With the

power disparity between retailers and producers in part attributed to the comparative sizes of the two, horizontal consolidation between suppliers may aid offset at least part of the imbalance.

Importantly, the social and economic impacts of standards regimes are not restricted solely to producers, and several studies have found evidence to suggest that the implications will be felt more broadly than by the producers who certify to private standards. Mather's study (2004) of fruit and wine producers in South Africa suggested that the substantial costs of certification to private standards had caused fruit and wine producers to change their labour hiring practices, decreasing the numbers of permanent farm employees and relying on increasing numbers of part-time and casual workers. This aligns with findings from other studies that found changes in labour hiring practices as a result of certification (Barrientos et al, 2003; Barrientos and Kritzinger, 2004; Du Toit and Ally, 2001). Thus, private standards are well placed to revolutionise food production with implications reaching well beyond food producers.

There is consensus among many commentators that private forms of regulation are of great consequence for the agri-food system (Busch and Bain, 2005; Campbell, 2005; Henson and Hooker, 2001, Henson and Reardon, 2005), however perhaps the most ambitious of these standards, GlobalGAP, remains to be extensively analysed (Campbell, 2005) in spite of the express aim of the standard becoming *the* global food production standard. This research aims to contribute to the literature on private standards, and GlobalGAP in particular, through three stages. First, it analyses the current global standards environment to contextualise the debates around private standards and their consequences for stakeholders. Second, it considers the economic and social environment in which private standards have arisen as a form of supply chain regulation. Finally, qualitative data is gathered through interviews with stakeholders, providing a diverse critique of the implications of private standards for an Australian citrus cooperative.

Practically, this thesis approaches these aims as follows. Chapter Two maps out the current standards environment, describing the development of contemporary food standards and their evolution over time, the typology of various standards that are in existence today and the supply chain actors they aim to influence. Chapter Two presents an in-depth analysis of GlobalGAP,

including the growth and evolution of the standard and certification practicalities. This chapter concludes with a brief overview of Freshcare, the leading food standard for the Australian horticultural industry.

Chapter Three considers the global social and economic conditions that have bounded the development of private food production standards from a regulation theory perspective. This chapter outlines the economic and social backdrop for the shift towards the retailer-centric agri-food network, the roll-back of nation-state governance and the growth of transnational supply chains. Chapter Three also outlines the actor perspective, the approach taken by this thesis in understanding how private standards are negotiated by the increasing numbers of farmers that seek to meet their complex requirements.

Chapter Four presents the research paradigm underlying this thesis, the methodology and the methods undertaken in the process of data collection. This section also considers the subjective role of the researcher, before moving on to introduce Gayndah Packers, the Cooperative used as a case study for this thesis, as well an overview of the global citrus industry. Chapter Four concludes by considering the possible limitations of this study.

Chapters Five and Six present the findings of the field research component of this study. Chapter Five takes a detailed look at the consequences for producers of certification to GlobalGAP, including the day to day implications for producers and the changes that have occurred within Gayndah Packers since certifying to GlobalGAP. Chapter Six focuses on the power dynamic with the production relations between Gayndah Packers and retailing organisations. This chapter also looks at the extent to which GlobalGAP achieves its aim of promoting environmentally and socially responsible agriculture.

Lastly, the findings of this study are synthesised within the final chapter, which makes some closing remarks about the difficulties of globally applicable food quality standards, and recommendations for further enquiry. Thus, with this framework in mind, the next chapter provides an overview of the current food standards environment.

2 The Standards Environment

2.1 Introduction

In Australia, early food standards addressed primarily the adulteration of food by manufacturers, and these standards were enacted as legislation by State governments. More recently the standards environment has become a complex web of government and private requirements. While governments still play an important role in food safety, food standards are likely to be developed and controlled by, or in conjunction with, private actors. These private food safety and quality standards often surpass the basic food safety or non-adulteration requirements of the public sector, encompassing a wide variety of prescriptive methods in the production process. In contrast to earlier post-production quality control enacted by private organisations, these standards take a pre-production, preventative approach, and are often certified by third party organisations. While there are many economic and social reasons for the development of these standards and certification schemes, they can also be the political project of powerful actors seeking to control aspects of the food chain.

Discussions on food standards can be mired by the rapid proliferation of standards themselves, and broad theorisations must consider the variety and diversity of food standards. To this end, this chapter attempts to map out the different types of standards producers may face in the global production environment. In doing so, this chapter presents a brief history of standards and certification schemes internationally and in Australia and presents an examination of GlobalGAP, the global food standard that forms the basis of this study. This chapter concludes with a brief outline of Freshcare, the key horticulture industry standard for Australian producers.

2.2 Food standards history

Food standards can be traced back as far back as the construction of the Pyramids of Egypt, and references to ancient food controls can be found in Chinese, Hindu, Greek and Roman texts (Lasztity, Petro-Turza and Foldesi, 2001), though health problems associated with the onset of

industrialisation and rapid growth of urban populations led to a rapid proliferation of food standards in the 1800s. In much of the industrialised world, these standards were a measure of quality control and were developed, managed and enforced by the public sector as food laws and regulations. In Australia, for example, controversy over the addition of alum to bread, stone grindings to flour, and the sale of margarine as butter drove State governments to enact laws such as the *Adulteration of Bread Act* in New South Wales in 1834 – the first food-related law in the country – and, several years later, the *Margarine Act.* The key goal of these preventative laws was to reduce the incidence of food sullying by manufacturers seeking to profit from the use of cheaper inputs. Around this period, food processing organisations were utilising various forms of post-production, inspection-based, quality control systems undertaken in-house (Fabiansson and Cunningham, 2000). Under this system, quality control was the responsibility of individual organisations, and these standards were enforced in-house alongside the applicable government-based legislations (Fabiansson and Cunningham, 2000). Post-production inspection remained the main form of quality control until the development of Hazard Analysis and Critical Control Points (HACCP).

Developed in 1959, HACCP was one of the first, widely applied preventative food standards. It was developed to control and assess each step of production for food, rather than rely on end-product testing, and in doing so, was intended to stimulate improvements in food safety practices. This preventative approach was quite different to earlier laws or quality control methods. However, the standard was not widely adopted until 1985 when a study recommended American regulators and industry use HACCP as an effective and efficient means of assuring food safety. This led to the development of an international HACCP standard in 1990 by the Codex Alimentarius Commission (CAC), a creation of the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO) that is tasked with developing food standards and guidelines. This period also saw the reinvigoration of the international standards body, the International Organisation for Standardisation (ISO), which had disbanded during the Second World War. ISO developed a series of standards, the ISO9000 series, outlining quality assurance and management techniques that underwrite safety and quality through preventative quality control. As noted above, the private sector had previously managed quality control within

individual organisations, and prior to the development and growth of ISO9000 and HACCP, there were large numbers of standards tailored to specific organisational requirements. Together with HACCP, the ISO family of standards brought about an initial decrease in new standards and certification systems in the 1970s and 1980s (Figure 2-1).

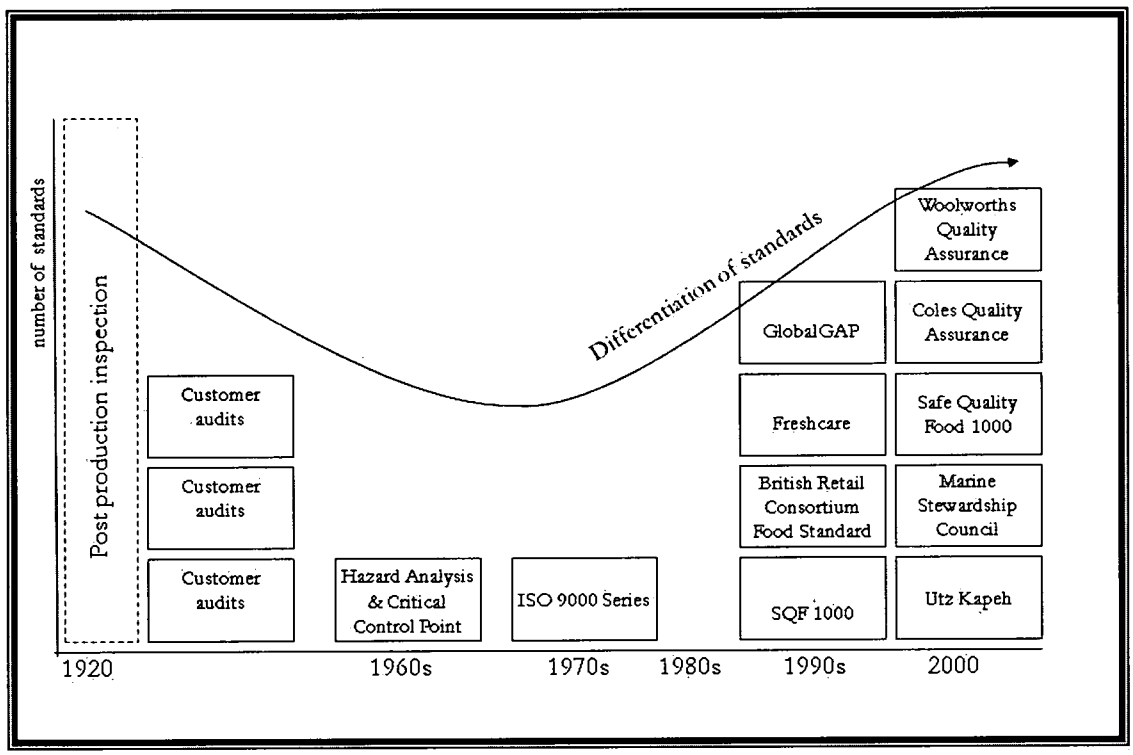

Figure 2-1 Development of certification and standards (Adapted, from Jahn, Schramm and Spiller, 2004)

Though these standards sufficed for underwriting food safety, the proliferation of transnational supply chains with increased market concentration and buying power, together with heightened consumer awareness and changing legal frameworks led to a vastly different operating environmental for retailers. These changes occurred slowly over a number of decades and will be dealt with in greater detail in the next chapter. However, they contributed to changes in supply chain governance that led to the development of private standards that addressed quality as well as safety in food production. Actors involved ranged from private sector collaboratives to international agencies and civil society organisations (Farina and Reardon, 2000; Konefal et al,

2005; Reardon and Farina, 2001; Sporleder and Goldsmith, 2001). This 'privatisation' of food standards, that is, shifting from being in the public domain through food laws and uniform food standards to being developed, controlled and regulated by private actors, led to a substantial increase in the development of new food standards. In some cases, the rapid change in legal liability requirements for retailers operating global supply chains has led to the demand for food safety and quality standards exceeding the supply of publicly developed standards, particularly in cases where public standards may be lacking or non-existent (Reardon and Farina, 2001; Fulponi, 2006).

In considering the shift from predominately public to predominantly private food standards it is worth considering three important differences in these modes of regulation. First, in comparison with the more protracted nature of public decision making, private standards are able to be altered almost immediately (Henson, Masakure and Boselie 2005). This means that they are able and likely to evolve over time to reflect changing requirements. Indeed, the ongoing upgrading has been a source of contention for GlobalGAP certified producers, especially those in developing countries (Graffham, Karehu and MacGregor, 2006). Second, private standards may be negotiated between market actors, rendering them more flexible than public standards. This is highlighted in the previous study, with producers successfully calling for the most recent round of GlobalGAP upgrading to be delayed (Graffham, Karehu and MacGregor, 2006). Henson and Reardon (2005) also illustrate the degree of negotiation possible between various actors in Central America, where retailing giant La Fragua 'bent' their standards requirements in order to accept produce that did not meet minimum requirements to meet consumer quantity demands. While, in these cases, producers may have benefited from the flexibility private standards can offer, this flexibility may be of concern where actors have unequal power or political interests. Third, in the shift from public legislation to private regulation, food standards have become process oriented. With an emphasis on standardisation, State imposed legislation was primarily concerned with food composition and residue limits. However, more recently developed private food standards include prescriptive production techniques that producers are required to conform with for certification.

As well as a growing number of privately developed and controlled food production standards, there are increasing numbers of actors involved in maintaining these standards, with third party certifying (TPC) organisations emerging as prominent actors in the new regulatory system (Hatanaka, Bain and Busch, 2005). Traditionally a role undertaken by the State, third party certifiers are frequently responsible for inspection and certification to private standards (Golan et al, 2001; Tanner, 2000). These organisations are responsible for assessing and certifying quality based on specific sets of standards and compliance methods. According to retailers, the advantage of TPCs is their independence and objectivity. This, they argue, ensures transparency and fairness in the application of private standards. However, their true impartiality is contested (Hatanaka, Bain and Busch, 2005; Hatanaka and Busch, 2008). Nonetheless, while the number of standards is rapidly increasing, Henson and Jaffee (2008) note the standards environment is increasing in complexity, with new actors such as third-party certifiers involved in the end to end process of food production.

2.3 Understanding different food standards

Considering private standards as a uniform group of regulatory instruments is problematic in attempting to understand their implications. There are numerous types of standards, each with a unique scope, geographical reach, function, key drivers, coverage, regulatory implications and so on. For example, are they national or international standards? Freshcare and EnviroVeg are Australian standards, developed for Australian producers, while GlobalGAP is applicable internationally for any supplier to parts of the European market. Another differential is their applicability for different supply chain actors: do they target a particular stage of the supply chain, or are they generic? ISO 9000 and HACCP are generic standards, applicable for the entire supply chain, while GlobalGAP targets primary producers. Standards can also be differentiated on their attributes. Woolworths Quality Assured and Coles Quality Assurance focus heavily on search attributes, which define observable attributes such as colour, shape and size. Other standards focus on attributes that are not determinable by consumers or through testing, such as social and

environmental stewardship. Examples include Fair Trade, Forest Stewardship Council and Utz Kapeh standards. Standards can also be categorised according to their purpose. Retailers seeking to differentiate their environmentally responsible produce from that of their competitors have developed firm-specific standards such as Tesco's Natures Choice and Carrefour's Filiere Qualite. In contrast, GlobalGAP integrates the standards of multiple retailers. Highlighting the extent to which different standards represent different goals and outcomes, Tesco and Carrefour develop and require standards to compete in niche markets like Natures Choice and Filiere Qualite, at the same time as working together on standards like GlobalGAP that standardise production.

The most useful classificatory system for this research is that of Nadvi and Waltring (2004), who identified global production standards according to 'generations' (Table 2-1). This highlights the chronological stages in the changing standards environment, the actors involved in different 'generations' of standards, and importantly, whether these standards aim to create niches or standardise food production systems. According to Nadvi and Waltring (2004) first generation standards tend to be generic and are usually developed by international organisations or a combination of industry groups to be applied across a range of industries. The ISO standards and HACCP are the most prominent first generation food production standards, and these standards are increasingly a feature in food production systems due to their incorporation in many privately developed standards, including GlobalGAP. Moving to second generation standards, the shift from generic to sector-specific standards reflects the technical specificity of production and the need for supply chain management (Nadvi and Waltring, 2004). Second generation standards tend to be developed by consortiums of large organisations and private sector industry groups. They are unlike first generation standards that are generic across industries and pertain more to reducing transaction and production costs. Developed by collaborations of private actors for the purpose of meeting their own requirements, second generation standards do not attract a price premium for producers, and point to supply chain dominance by standards setting groups. Key examples relevant for the Australian horticultural industry include GlobalGAP and Freshcare.

Table 2-1: Food standards categories (adapted from Nadvi and Waltring, 2002)

GENERATION	*EXAMPLES*	*ACTORS INVOLVED*	*KEY DRIVERS*	*CERTIFICATION PROCESS*
1st generation GENERIC	ISO 9000 HACCP	National standardisation bodies and large business actors, accredited certification bodies	Industry (trade associations, TNCs, certification bodies)	Third party market based auditors
2nd generation SECTOR SPECIFIC STANDARDISING	GlobalGAP Safe Quality Food 1000 British Retail Consortium Food Standard Freshcare	Large TNCs, sectoral business associations, accredited certification bodies International institutions (eg. FAO, WHO), national control institutions with public duties, governmental representatives Food retailers, importers, suppliers	TNCs, lead firms Industry associations	Third party market based auditors Third party certification though public-private institutions with public duties
3rd generation COMPANY SPECIFIC DIFFERENTIATING	Woolworths Select You'll love Coles	Large national and TNCs with a dominant position in the market and a leading role in their supply chain	TNCs, lead firms	First and third party monitoring and certification

Third generation standards are company based standards developed by, or on behalf of, a single organisation. More often than not, these are food wholesalers, processors or food service organisations. While they also do not attract a price premium, to a greater extent producers are able to pick and choose which standards to comply with by shifting between markets. They incorporate food safety attributes and are increasingly likely to include attributes such as Occupational Health and Safety (OHS), and environmental and social stewardship. Approved supplier schemes fall into this category, with key examples for Australian horticultural producers including the McDonalds Approved Supplier Scheme and Spotless Food Safety Standard for Suppliers. It is worth mentioning a subgroup of standards that lie somewhere between second

and third generation standards and are often based on unique aspects of the target industry. Schemes such as 'Grape to Glass' and 'Enviromeat' do not fit into this classificatory system, but are important for many industry sectors. Some standards in this subgroup incorporate social and environmental considerations like Enviromeat and Utz Kapeh, and unlike other standards, these attract a price premium for producers. In some cases standards in this sub-group have been superseded by second or third generation standards like GlobalGAP as they expand in reach to include social and environmental aspects of production.

Despite the value in classifying standards, and the value and implications of the above classification system, such attempts remain fraught with problems. There are, for example, company specific standards that pre-date some of the sectoral standards listed above, and this classification system fails to adequately account for private standards established by not-for-profit organisations, such as organic food standards. Futhermore, GlobalGAP can be set apart from other second generation standards. Like the British Retail Consortium Food Standard, GlobalGAP was developed by a consortium of retailers to provide a baseline standard that has become a requirement for market entry, with the aim of standardising and integrating pre-existing quality assurance and risk management programs across continents. However, unlike the British Retail Consortium Food Standard, GlobalGAP extends beyond quality to incorporate social and environmental goals with a level of complexity far removed from other second generation standards. With most key retailing chains in Europe requiring GlobalGAP certification, and many non-European retailers accepting GlobalGAP as a baseline food production standard, GlobalGAP has the potential to dictate production processes on a global scale.

The difficulty for commentators in classifying standards underscores the difficulties arising for producers that are increasingly required to navigate complex webs of standards. Many third generation standards are applicable within single markets, and there is considerable crossover between standards, meaning producers are often required to certify to multiple schemes to supply different markets. For example, an Australian producer exporting produce to the UK and trading in Australia with Coles and Hungry Jacks would be required to meet the certification requirements for all three markets. Within each of these individual supply chains, there may be several options for certification, and some standards may or may not be benchmarked against others. Separate

audits would most likely be required for each standard at the expense of the producer. In addition to these private standards, the producer would also be required to ensure compliance with local and international customs and quarantine regulations. Moreover, the standards requirements of retailers and other actors are frequently shifting, and producers are expected to adhere to the updated requirements to maintain certification. In Australia, for example, both Coles and Woolworths previously required independently certified, HACCP based quality assurance of fresh produce for direct suppliers only, usually packers and wholesalers, and producers that supplied directly to retailers. With many growers supplying retailers indirectly through third parties such as packers and wholesales that supplied retailers directly on behalf of producers, the focus was largely on packers and wholesalers. Recently, however, the focus of large retailers has shifted to direct and indirect suppliers, so all suppliers are required to have HACCP certification (Bennett, 2005).

In spite of the difficulty in categorising different standards, however, it can be seen that what is occurring is a shift from government to governance in the agrifood system, where governance refers to "the development of governing styles in which boundaries between and within public and private sectors have become blurred' (Stoker, 1996, p. 2). In the case of food standards, these boundaries have become blurred due to increasing private sector engagement in the development and auditing of food standards, and a retreat from these actions on the part of government. What is clear is that there is a significant shift in the bodies that contribute to, or wish to contribute to, new governance systems around food supply chains.

Consumers have benefited from this shift to governance where standards have been tightened in areas that have previously raised safety concerns, and where new standards continue to be developed to address food safety concerns (Henson and Reardon, 2005). It should be noted, however, that benefits to consumers are not clear cut, and some studies have found that some groups of consumers remain marginalised in governance systems dominated by private retailers (Marsden et al, 2000). Aside from the problems private governance poses for food producers (discussed in detail in sections 1.2, 3.4 and 3.6), this shift raises concerns for governments which, in many cases, have been unable to keep pace with changes occurring in global supply chains

(Hatanaka, Bain and Busch, 2005; Henson and Reardon, 2005). Marsden (2000) for example highlights that food issues often transcend beyond singular state agencies to cross political boundaries. So who are the winners of this shift from government to governance? The implications for private sector retailers, who in many cases are at the apex of the development of food standards and play a key role in their legitimisation, are great. On the one hand, they allow retailers to minimise the risks associated with food retailing in supply chains that stretch beyond national borders, while competing in an increasingly oligopolistic retail environment. On the other, they provide a means through which retailers can sure up supply chain relations by linking in with food producers. Broadly speaking, however, there are complex and varying reasons for the shift from government to governance, and attempting to ascertain the benefits for standard-setting organisations is complicated without examining individual standards in detail. Thus, it is relevant at this point to consider in detail GlobalGAP, the standard that is the focal point for this study.

2.4 Eurep

GlobalGAP was developed in 1999 as an initiative of the Euro-Retailer Produce Working Group (Eurep). Initially the group represented a large number of UK-based retailing organisations that were facing an increase in liability risk due to the introduction of British legislation requiring retailers to take 'reasonable precautions' and exercise all 'due diligence' in the development, manufacture, distribution advertising and sale of food. It was expected that this legislation would lead to enactment of similar laws across the European Union, and retailers began to respond by developing their own verifiable standards. Within this context, GlobalGAP aims to set an international benchmark for on-farm certification to ensure production is undertaken in a "responsible way that respects food safety, the environment, workers welfare and the welfare of animals" (Eurep, 2008a). Initially called EurepGAP, the standard changed to GlobalGAP in 2008, reflecting its somewhat self-appointed position as the pre-eminent international standard for Good Agricultural Practices (GAP). GlobalGAP requires producers to undergo annual third party certification (TPC), as well as unannounced inspections. The certification costs are borne

wholly by producers, with no price premium for certified produce (Baines and Davies, 2000; Bain, Deaton and Busch, 2005).

Official GlobalGAP media releases suggest there were several drivers for the development of the standard (Eurep, 2005a). Food crises including excessive pesticide residue, bovine spongiform encephalopathy (BSE), dioxin and other poisons residues; media pressure through 'name and shame policies'; and a desire for supply chain risk reduction led retailers to develop safety standards. In addition, consumer demand for consistent high quality food combined with 'triple bottom line' production that considers social, environmental and economic sustainability; and frustration at navigating both the many national governments in Europe and the European Union bureaucracy based in Brussels, contributed to the inclusion of quality processes and social and environmental considerations. Thus, with the aims of mitigating risk associated with retailing, and responding to consumer and government pressures, Eurep, supported by at least one agro-chemical company (Campbell, 2004), established a set of normative, sector-oriented schemes outlining production requirements for primary producers.

2.4.1 The GlobalGAP standard

GlobalGAP is a single standard with modular applications, so that applying the standard for fruit and vegetable production requires a series of 'standards' (Figure 2-2). It covers a range of issues from health documentation for production inputs, through to agro-chemical use, sustainable land management, and harvesting and packaging (Appendix A). Within each module, the standard is broken down again into further 'blocks' of documentation. Within the Fruit and Vegetables module, for example, are a series of complex documents:

- General Regulations (GR) - system rules (121 pages plus annexes)
- Control Points and Compliance Criteria (CPCC) – GlobalGAP standard (67 pages)
- Checklists (CL) – inspection documentation (320 producer 'checks', plus quality management system checks)
- Approved National Interpretation Guidelines – national GAP requirements

- Benchmarking Cross Reference Checklist (BMCL) - harmonisation tools

The CPCC documentation contains control points under multiple subject areas. For example, within the Fruit and Vegetables CPCC, Record Keeping, Site Management, Workers Health, Safety and Welfare, Traceability, Propagation Material, Irrigation and Fertigation, and Environment and Crop Protection are included. Each subject area contains a number of 'control points', which have an associated compliance level. Compliance levels are determined by the priority of the control point, and are either 'major must', 'minor must' or 'recommended'.

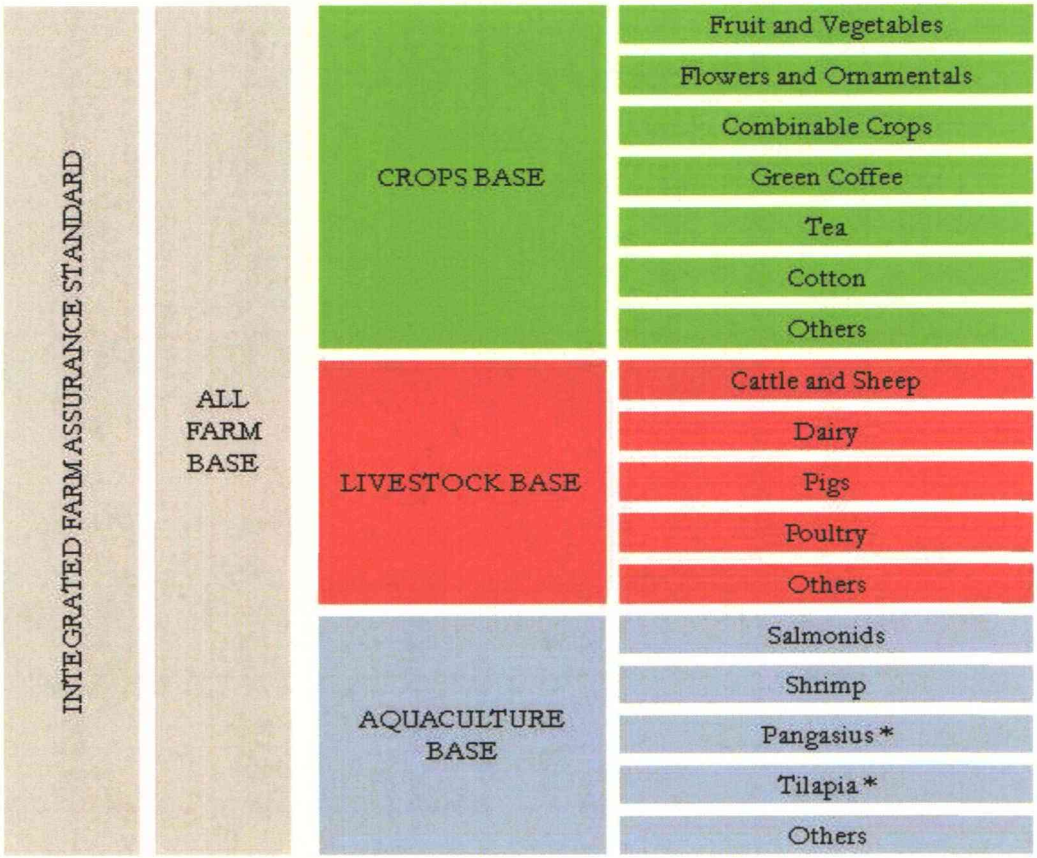

Figure 2-2: Modular standards under GlobalGAP (Source: Eurep, 2008a)

Certification is attained when producers meet the required proportion of control points. Producers must comply with all 'major musts' and at least 95 per cent of 'minor musts'. There is no minimum level of compliance for 'recommended' control points, and although these points

are inspected during all internal and external auditing, they are not requisite for meeting certification requirements.

2.4.2 Certification options

There are three certification pathways for producers. First, growers can apply as an individual farmer for GlobalGAP certification. It is the responsibility of the applicant to complete an annual self-inspection and to successfully complete at least one announced audit per year by a TPC organisation. In addition, the TPC organisation is required to carry out unannounced inspections of 10 per cent of all producers registered under this option. The second option is Group Certification. Under this option, farmer groups registered as a legal entity can apply for certification as a registered group. The farmer group must have in place an internal management and control system, and each farmer must undergo the same annual self-inspection as individual farmers. Additionally, farmer groups must have an annual inspection on each registered property by an internal, qualified staff member, and a specified number of growers selected randomly must undergo external auditing by an approved TPC organisation. There is no unannounced auditing of farmer groups. The final option for GlobalGAP certification is through certifying to a GlobalGAP benchmarked scheme. This can be done individually or as a group. In this case, growers are expected to operate according to the rules of the benchmarked scheme. However, producers must be audited according to the requirements for GlobalGAP certification previously outlined. There are currently 15 standards favourably benchmarked against GlobalGAP and another seven standards in the application process. There are no Australian horticulture standards benchmarked against GlobalGAP.

The regulations for group certification (Appendix B) stipulate several requirements that must be completed by individual growers for the group to maintain certification. The organisation must develop a Farmer Group Quality Management System (FGQMS) to inspect farms against the GlobalGAP standard. The FGQMS is a quality management system developed within the farmer group that is required to act similarly to an external

TPC body by imposing sanctions on those who do not meet the GlobalGAP requirements (Table 2-2). Each farm must be inspected at least once per year against the GlobalGAP checklist. If a grower does not meet the compliance criteria, the FGQMS must sanction the grower in the same way as an external TPC body. During audits conducted by the external TPC organisation, the FGQMS and a random sample of growers are audited. During the random sample of growers, if non-conformances are found that were previously undetected by the FGQMS the sanctions applied are applicable to the entire farmer group. For example, if the TPC body identified a major non-compliance that had previously not been identified by the FGQMS, an immediate suspension of GlobalGAP certification would apply to the entire farmer group. If the farmer or FGQMS is able to identify the non-compliance point prior to the audit and communicate it to the external TPC body and to customers, a partial suspension would apply to the farmer in question, provided the affected produce was identifiable and traceable.

Table 2-2: Farmer Group Certification sanctions for GlobalGAP non-conformance (Source: Eurep 2007c)

12.1 Major Must
12.1.1 Immediate Complete Suspension: If a major must is detected and verified by the CB as not having been complied with by the Farmer Group, who has not put in place suitable corrective actions, not declared it to customers and CB, immediate Complete Suspension of the certificate for a period of 3 months is imposed. If the non-compliance of the same Major Must Control Point is repeated, Cancellation of the certificate is imposed.
12.1.2 Immediate Partial Suspension (following advance notification): If the certified Farmer Group declares a non compliance with a *Major Must* by communicating it to direct customer(s) and to the CB, before it is detected externally by the CB, and puts in place suitable corrective actions to avoid the re-occurrence of this Non-compliance, then an Immediate Partial Suspension of the certificate is imposed, whose extent is agreed with the CB. The extent of this immediate partial suspension can be limited to a clearly identified, traceable part of a crop or produce (field or batch) where there is a clear and identifiable traceability system on farm that permits identification of that extent.
12.2 Minor Must
12.2.1 Deferred Suspension: If more than 5% of applicable *Minor Musts* are not complied with, a Deferred Suspension of certificate is imposed. Where required, corrective action must be verified by the CB (by site visit or by other form of documented verification) within a maximum period of 28 calendar days.

All producers must maintain records of the 'control point' questionnaires and self-audit at least once during the year. CBs sanction producers that are unable to meet certification requirements in one of three ways. A warning is issued when producers do not comply with 95% of the 'minor musts' and the producer must take corrective action within 28 days. Non-compliance with a 'major must' requires an immediate, temporary suspension of certification until the required action is taken. In the case of repeated failure, certification may be withdrawn altogether.

2.4.3 GlobalGAP Evolution

After two years developing GlobalGAP, the first version of the Crops standard, then called the Fruit and Vegetable (F&V) standard, was released in September 2001. The original standard covered fifteen key areas including traceability, site management, soil management, fertiliser use, irrigation, harvesting, waste and pollution management, worker health, safety and welfare and environmental issues in 149 short, simply worded control points described by some observers as 'vague' (Amariei, 2004; FAO, 2003; Van der Grijp et al, 2005). There have since been several releases, the most recent in September 2007, and with each release the standard has become substantially more comprehensive (Figure 2-3). In fact, it has been suggested that, "a thorough restructuring has taken place, related to form as well as content" over this period (Van der Grijp et al, 2005). Commentators have consequently expressed concern about the ability of producers from developing countries to certify to GlobalGAP due to the increasing complexity of the standards and requirements for formal documentation, computerisation and other aspects of the standard that presuppose a 'northern' style production environment (Campbell, 2004). The September 2007 release of the standard shows a 56 per cent increase in the number of control points since the first release in 2001. Over the same period, the number of 'major musts' included in the Crops standard tripled and the number of 'minor musts' almost doubled (Figure 2-4).

VERSION	*CONTROL POINT*	*COMPLIANCE CRITERIA*
September 2001	6.4.3 Fertilisers must be stored in a clean, dry location where there is no risk of contamination.	n/a
September 2007	6.4.6 Are inorganic fertilisers stored in an appropriate manner, which reduces the risk of contamination of water courses?	All inorganic fertilisers ie powders, granules or liquids, stored in a manner which poses minimum risk of contamination to water sources, ie liquid fertilizer stores must be surrounded by an impermeable barrier (according to national & local legislation, or to contain a capacity to 110% of the volume of the largest container if there is no applicable legislation), & consideration given to the proximity to water courses and flood risks, etc.

Figure 2-3: Example of changes in Control points and compliance criteria, 2001-2007 (Source: Eurep 2001, 2007c)

Areas in which there has been significant growth include Self-inspection; Irrigation and Fertigation; Crop Protection (in particular, chemical application records, chemical storage and handling, and the management of empty chemical containers); Harvesting (in particular, hygiene issues, post-harvest washing and treatments, and on-farm facilities for produce handling and storage); and Worker Health and Safety (Figure 2-5).

While an increase in the number of control points and their complexity suggests an intensification of GlobalGAP, it is worth considering the specific areas in which these changes have occurred. The first version of the standard encouraged the use of HACCP, which has since been incorporated as a key component of food safety in latter versions of the document, enforcing food safety as a key goal of the standard. Van der Grijp et al (2005) suggest this change is reflective of the high priority for food safety issues at the EU and national government levels. During the same period, Integrated Pest Management (IPM) which, alongside Integrated Crop Management (ICM), was heralded in the first standard as 'regarded by Eurep members as essential for the long-term improvement and sustainability of agricultural production' (Eurep, 2005b) has moved from a 'requirement' in 2001, to a 'minor must' in 2007. While some commentators have suggested that GlobalGAP can promote environmental protection (Gereffi et al, 2001), since the first release of the standard it appears that the emphasis has turned to safety and quality attributes at the expense of environmental control points (Figure 2-5). There is a legitimate question regarding the extent to which the goals of Eurep remain aligned with achieving environmentally sustainable agriculture (Campbell, 2005; Van der

Grijp et al, 2005). The Food and Agriculture Organisation (FAO) thus categorises GlobalGAP as an environmental and social standard, but notes these aspects of the standard tend to be "rather vague" (FAO, 2003).

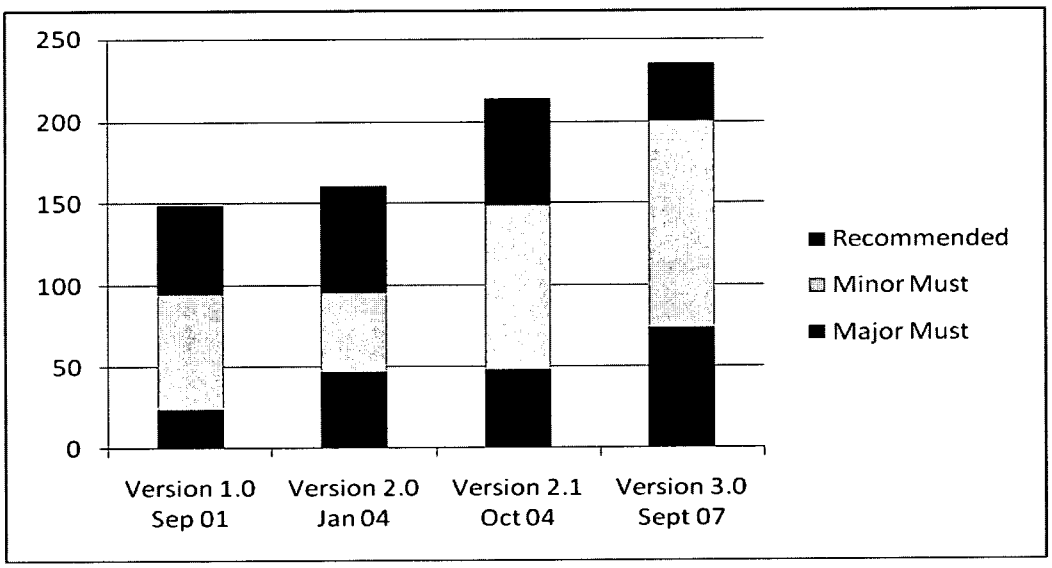

Figure 2-4: Increase in Control Points in GlobalGAP Crops standards from Version 1.0 – Version 3.0 (Source: adapted from Eurep 2001, 2007c)

In spite of this, several 'environmental' aspects of the standard have become more strongly emphasised between releases. For example, cultivation techniques that minimise erosion have moved from a recommendation to a minor compliance point; and issues in the dedicated 'Environmental' section of the protocol have doubled, from four to eight control points. However, seven of these control points are 'recommended' control points, rather than minor or major musts. Thus, it is worth nothing that, while one of the justifications made by Eurep for the development of GlobalGAP is the need to allay consumer concerns about the social and environmental behaviour of the producers within Eurep members' supply chains, many studies that consider the social and environmental attributes of standards make the point that key requirements to ensure stewardship in these areas are missing from GlobalGAP standards. For example, Riisgaard (2007), in comparing GlobalGAP to other social standards like Max Havelaar, Horticultural Ethical Business Initiative, Ethical Trading Initiative and other social standards,

suggests that GlobalGAP is the least comprehensive for labour issues, and does not require basic workers' rights such as collective bargaining, work contracts for staff, awareness raising of workers' rights or workers' representation. Furthermore, as a business-to-business standard that is invisible to the consumer, GlobalGAP remains, at least to some extent, shielded from public scrutiny in a way that standards like organic and biodynamic are not. It has been argued that business-to-business standards like GlobalGAP are often an effort on behalf of standards developers to control suppliers (Schulze et al, 2006). Nonetheless, while GlobalGAP is pitched at reassuring consumers that their food is produced in a way that reduces environmental and social harm (Eurep, 2008), the standard must be assessed in the context of the failure of GlobalGAP to transmit information about production practices to consumers.

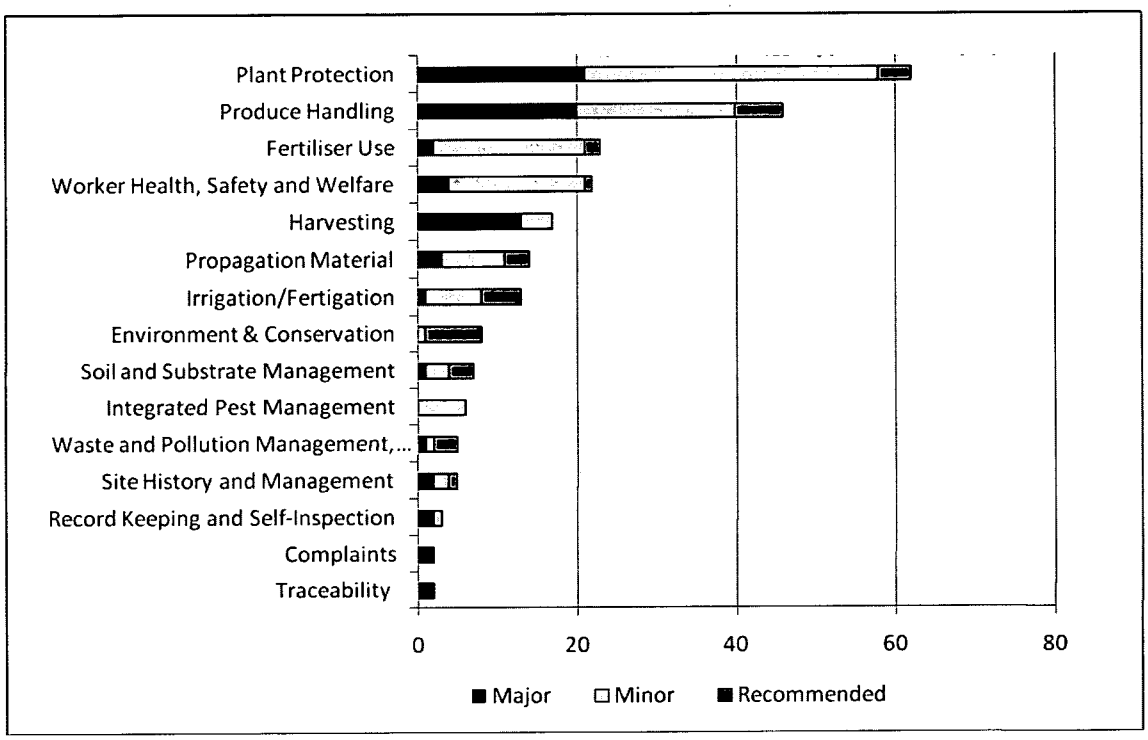

Figure 2-5: Control point coverage, GlobalGAP version 3.0 (Source: adapted from GlobalGAP 2007c)

In addition to changes to the environment section, there has been greater emphasis placed on 'Worker Health, Safety and Welfare'. This is in line with OH&S changes occurring throughout the European Union (EU), and control points like those regarding risk assessment for employees

are reflective of changes in EU legislation. The alignment of control points with EU legislation underscores the extent to which GlobalGAP will promote European social and environmental values and legislation well beyond Europe. Following this trend, there has also been an increased focus on food safety, including traceability and hygiene, and these changes appear to have come at the expense of environmental and social stewardship.

Since GlobalGAP was initially released requirements regarding Plant Protection, Produce Handling and Fertiliser Use have remained of key importance. These sub-sections are primarily concerned with processes that affect food safety and quality, and in earlier versions of the GlobalGAP Crops standard, these areas contained a substantial number of control points. However later versions have seen an increase in control points in these sub-sections to the extent that they dominate the latest GlobalGAP standard. Taken together, Plant Protection, Produce Handling and Fertiliser Use, contain almost two thirds of the total control points. Thus, as Van der Grijp et al (2005:36) note, "the overall conclusion is that the Eurep initiative has turned, within a 7-year period, from a broad initiative dealing with various sustainability issues, into a program that is primarily focussed on food safety and hygiene".

2.4.4 The GlobalGAP governance structure

The operational aspects of GlobalGAP are managed by FoodPLUS, a non-profit organisation based in Germany. Funded through membership fees, FoodPLUS provides 14 staff and an independent chairperson who sits on the Steering Committee. The overall body is governed by an eight-person Board of retailer and supplier members of GlobalGAP, plus the Chairperson.

GlobalGAP is comprised of three groups of committees underneath the Board (Figure 2-6): the Sector Committees (SC); the National Technical Working Groups (NTWG); and the GlobalGAP Certification Body Committee (CBC). The GlobalGAP standards were developed originally by the SCs (originally called the Technical Standards Committee) for each sector; crops, livestock and aquaculture. The SCs continue to manage, review and update the standards in conjunction with external advice from scientific and technical experts, and are responsible to the GlobalGAP

Board. The SCs are comprised of peer-nominated GlobalGAP members elected by their peers for a three-year period. According to GlobalGAP, these members are appointed to contribute their personal expertise rather than to represent company interests (Eurep, 2006a). The members of GlobalGAP that make up the SCs fall into one of three categories: Retail and Food Service Members, Supplier Members and Associate Members. The main benefit in GlobalGAP membership is the ability to contribute to and participate in GlobalGAP working groups and Committees (Eurep, 2006a), although associate members are unable to participate in these groups. Membership of GlobalGAP is independent of certification.

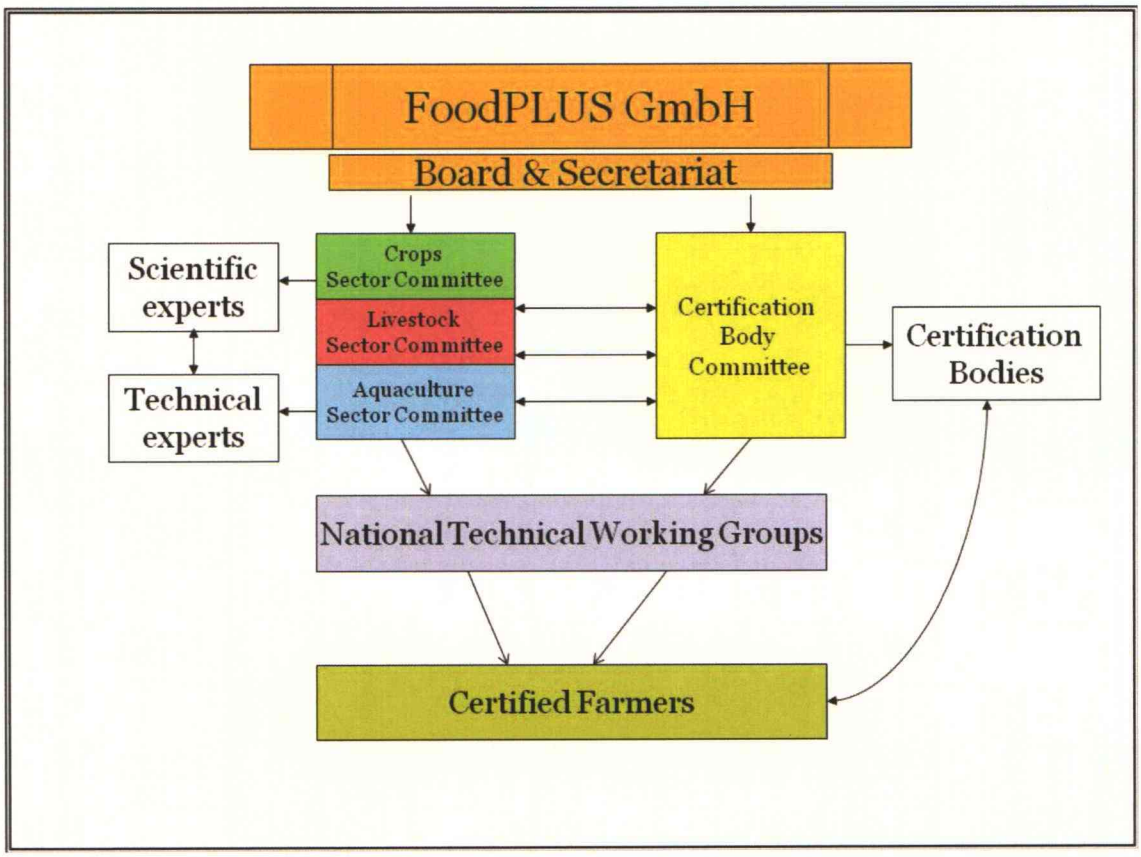

Figure 2-6: GlobalGAP structure (Source: adapted from Eurep, 2008a)

The second of the committees, the GlobalGAP CBC is tasked with maintaining the relationships between global certification bodies and the remainder of the GlobalGAP system. The main goal

of the CBC is to discuss and provide feedback between the two parties, in particular regarding implementation issues. The CBC is the key body responsible for stakeholder consultation within the GlobalGAP governance system. The final key group is the NTWG, which provides a point of contact for growers that require clarification on the implementation of GlobalGAP at a local level. These groups are formed voluntarily at the country level and work in close contact with the relevant SC's to provide support to growers implementing GlobalGAP.

Suppliers and retailers are equally represented within the committees outlined above. However a number of inequities are evident. For example, of 14 members within the Crops SC, 12 are from developed countries and all represent large organisations. Suppliers from developing nations and smaller producers are not represented (Table 2-3).

Table 2-3: GlobalGAP Crops Sector Committee members (Source: Eurep, 2008a)

MEMBER ORGANISATION	*COUNTRY*	*PRODUCER /RETAILER*
Fruits Development Foundation	Chile	Producer
Tesco	UK	Retailer
Fruit South Africa/SHAFFE	South Africa	Producer
VBT	Belgium	Producer
Dutch Produce Association	Netherlands	Producer
Horticulture New Zealand /Zespri	New Zealand	Producer
Ahold	Netherlands	Retailer
Sainsburys	UK	Retailer
Edeka	Germany	Retailer
Aldi Sud	Germany	Retailer
Aeon	Japan	Retailer
Apo Fruit	Italy	Producer
Fyffes	UK	Producer
Metro Group	Germany	Retailer

The Fruits Development Foundation, representing Chile, is a technical, scientific private organisation that coordinates research and development activities, while Fruits South Africa is a large organisation that represents fruit producers across the southern hemisphere. There are no retailing organisations representing 'southern' retailers, although at the time of writing there were

no retailer members from 'southern' nations. This is in spite of the GlobalGAP policy of waiving membership fees for organisations that provide members for the committee. No information is available on tacit expenses associated with participating in GlobalGAP committees; however, it is assumed that at least some travel would be required. In this regard, small organisations may be unable to participate in GlobalGAP committees in spite of GlobalGAP waiving membership fees.

The CBC is also dominated by European and developed nation interests, and there is no representation of Asia or Latin America in spite of large numbers of suppliers in these regions (Table 2-4). As the driving influences within Eurep, the dominance of European members in these two Committees raises questions of equity for the developing world and suggests that, as far as the standard and certification system behind GlobalGAP are concerned, non-European nations may be disadvantaged through non-representation.

Table 2-4: GlobalGAP Certification Body Committee members (Source: Eurep, 2008a)

MEMBER ORGANISATION	*COUNTRY*
Perishable Products Export Control Board (PPECB	South Africa
Det Norske Veritas Italy	Italy
SGS Belgium	Belgium
AFRICERT LTD	Kenya
Efsis/SAI Global Ltd	United Kingdom
CMi Certification	United Kingdom
National Britannia Certification Ltd	United Kingdom

Also notable is the absence of organisations representing environmental and social interests. Although Eurep states that it provides a 'forum for continuous improvement of the standards, through consultations held with producers and retailers' (Eurep, 2006a) there is limited capacity for input from stakeholder groups other than retailers and large suppliers (Van der Grijp et al, 2005). As noted above, SC membership is open only to retail and supplier members of GlobalGAP, or only those representing economic interests, predominately from developed nations (Table 2-5). While civil society groups and other organisations representing social and environmental interests can join as associate members, associate members are not involved in

decision-making, leaving large, predominately European retailers and suppliers to develop the GlobalGAP standards.

Table 2-5: GlobalGAP membership structure (Source Eurep 2008a)

	Developed	*Proportion*	*Developing*	*Proportion*
Retailer	38	100.0 %	0	0.0 %
Supplier	111	79.3 %	29	20.7 %
Retailer + Supplier	*149*	*83.7 %*	*29*	*16.3 %*
Associate	74	74.0 %	26	26.0 %

2.4.5 GlobalGAP growth

GlobalGAP has experienced extraordinary growth in membership since its first release. The standard provides a mechanism for retailers to minimise risk throughout supply chains; standardise procurement requirements and systems; and integrate standards addressing food safety, quality, labour, animal welfare and social and environmental stewardship. GlobalGAP membership and certification allows retailers to source high quality produce while maintaining or developing claims along the lines of supporting sustainable agriculture. Additionally, GlobalGAP operates alongside pre-existing premium quality standards, which Campbell (2004) suggests is a significant consideration given retailer expenditure on the development of these standards and labelling schemes. In a study conducted with major European retailing chains, Fulponi (2006) found these to be key incentives that drive retailers to develop or enforce private standards through the supply chain. Furthermore, the incorporation of retailers into the SCs governing the development and benchmarking of standards is a key incentive for retailers. The substantial growth in retailer members is a much-publicised aspect of the standard, and, aside from the single US and Japanese organisations, GlobalGAP retail membership comprises many of the largest and most powerful retail chains in Europe (Table 2-6).

Table 2-6: GlobalGAP Retailer members (source: Eurep 2008a)

COMPANY	*COUNTRY*	*COMPANY*	*COUNTRY*
Spar Austria	Austria	Albert Heijn	Netherlands
Delhaize	Belgium	CBL	Netherlands
FEDIS	Belgium	Schuitema	Netherlands
Kesko	Finland	Super de Boer	Netherlands
ALDI Einkauf & GmBH	Germany	Superunie	Netherlands
EDEKA Fruchtontor	Germany	Coop Norden	Norway
Globus SB Warenhaus	Germany	Eroski	Spain
Kaisers Tengelmann	Germany	Grupo Carrefour	Spain
Lidl Stiftung & Co	Germany	ICA	Sweden
McDonalds Europe	Germany	Coop Switzerland	Switzerland
Metro Group	Germany	Migros	Switzerland
NORMA	Germany	ASDA Group	United Kingdom
OTTO	Germany	Marks and Spencers	United Kingdom
Plus Warenhandel	Germany	Sainsburys	United Kingdom
Rewe	Germany	Somerfield	United Kingdom
Tegut.. Gutnerlet Stiftung.	Germany	Tesco	United Kingdom
Musgraves Supervalu Centra	Ireland	Waitrose	United Kingdom
Aeon Co., Ltd	Japan	VM Morrisons	United Kingdom
Ahold	Netherlands	Wegmans Food Market	United States

The number of GlobalGAP Associate Members has also grown significantly. Associate member organisations include agro-chemical companies, food control bodies and certification bodies. In 1999, 21 organisations were Associate members of Eurep across all five GlobalGAP sectors. This had increased to around 278 member organisations by 2008. As the number of organisations associated with GlobalGAP increased, so too did the number of GlobalGAP certified producers. Across the crops, livestock and aquaculture standards, the number of GlobalGAP certified producers increased from 4,000 in 2002 to 81,000 in 2008 (Figure 2-7), and a further 6,000 producers were in the process of gaining certification (Eurep, 2008b). These producers were

increasingly geographically dispersed, with a 300 per cent increase in the number of countries represented in the same period (Eurep, 2008c).

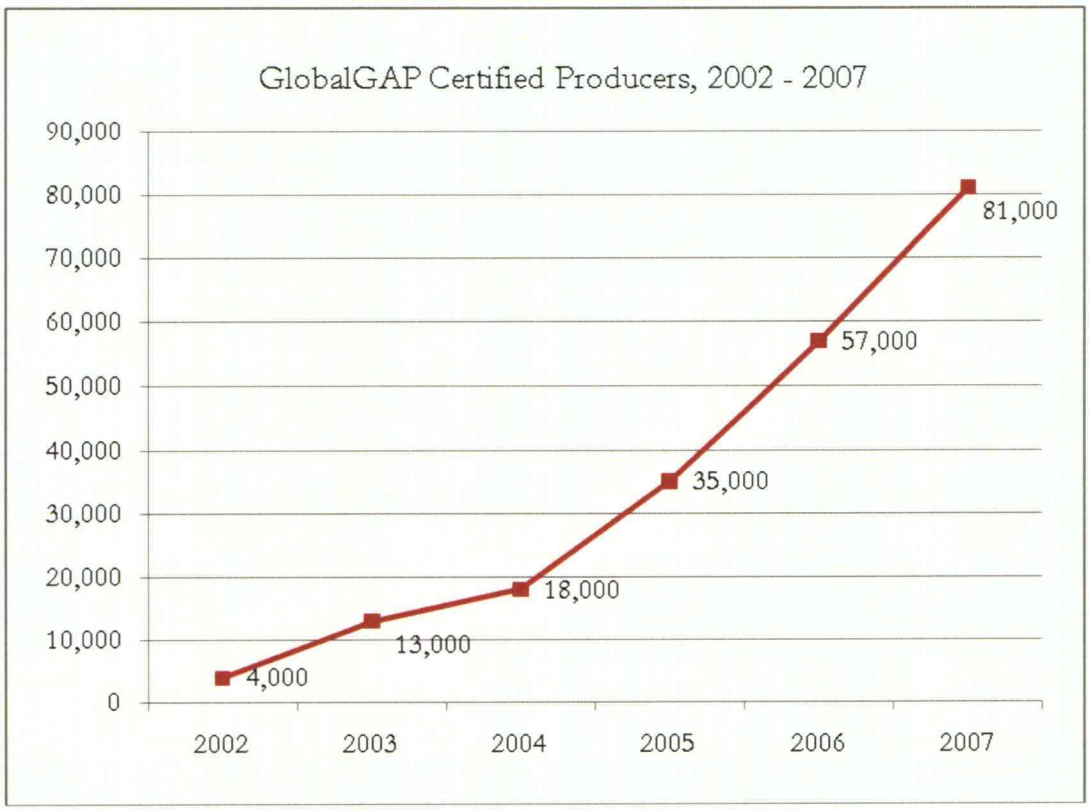

Figure 2-7: GlobalGAP Certified Producers, 2002 – 2007 (Source: Eurep 2008a)

The increase in numbers of GlobalGAP certified producers is undoubtedly influenced by its adoption as the minimum requirement for market access by key European retailers. However, there are other certification incentives for producers. GlobalGAP was developed during a period in which producers were faced with an increasing array of production standards. Australian producers have been overwhelmed by a proliferation of food standards (Geno, 2001; Reeve and Black, 1993), and are increasingly reluctant to certify to multiple certification schemes (Bennett, 2005). Integrating a number of standards requirements, GlobalGAP is more rigorous and therefore, more likely to be accepted by buyers than many other standards. Thus, certification to GlobalGAP could reduce the food standards requirements for producers and,

indeed, importers that act as an intermediary between retailers and producers have promoted GlobalGAP certification to producers along these lines. In addition, GlobalGAP requires full certification for an entire crop, even if only part of the crop is to be sent to a GlobalGAP retailing organisation. This means that producers with only a section of their crop contracted for a GlobalGAP retailer must have certified their entire crop to prevent the risk of contamination of certified produce, and this has contributed to the growth in GlobalGAP certified producers (Campbell, 2004). The increase in retailers and producers requiring certification has also driven an increase in the number of GlobalGAP accredited certifiers which increased six-fold (Figure 2-8), from 18 to 115, between 2001 and 2007 (Eurep, 2008c).

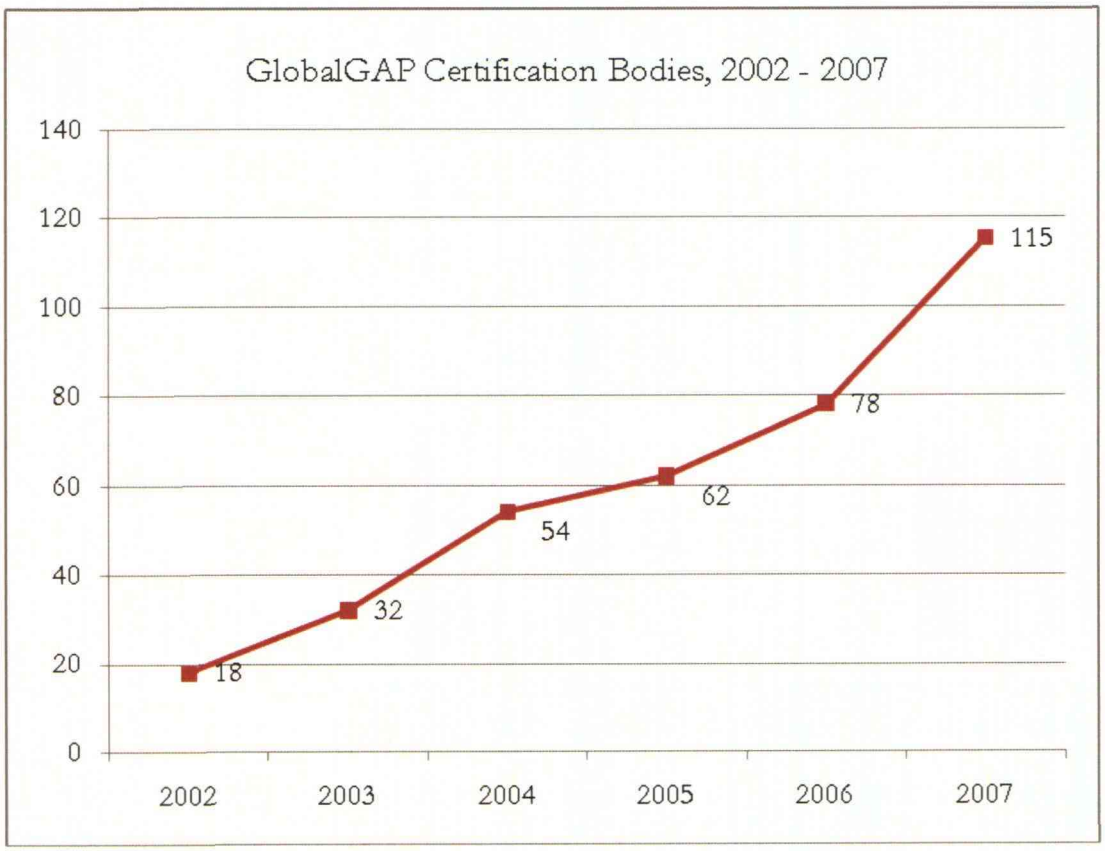

Figure 2-8: GlobalGAP Approved Certification Bodies, 2002 - 2007

It is interesting to examine the ways in which other organisations have evolved to accommodate the requirements of GlobalGAP. As noted by Campbell (2005), "success breeds success", and aside from actors directly involved in GlobalGAP like regulators, producer groups and government organisations, other private sector organisations are tailoring a number of innovations to fit with GlobalGAP. For example, Japanese retailer Aeon, in conjunction with the mobile communications industry, is currently developing a system for producers to manage GlobalGAP requirements through mobile communications devices. Producers will be able to perform management tasks, as well as transmit information to internal databases electronically, to reduce the time taken to manually recode data. The database could be used to make comparisons regarding 'present situation' and 'desired situation' for a range of inputs. Aeon also intends to make this database accessible for consumers, who, using mobile communications devices, will be able to photograph a code located on the product packaging to obtain detailed information about the production history of the produce (Eurep, 2007a). Another example is that of PROGIS, who are seeking to incorporate geographic information software (GIS) with GlobalGAP and Google Earth to reduce manual administration work associated with maintaining certification (2007b). The mobilisation of resources around GlobalGAP is indicative of the power of this standard, and suggests an integrative capacity that may revolutionise many aspects of the supply chain.

2.5 Freshcare

Freshcare is the leading Australian food standard for the horticultural industry (Bennett, 2005). It was developed in 2000 in response to the food safety requirements of two key retailers; Coles Myer Ltd and Woolworths Ltd. Freshcare is owned by 18 peak bodies of the horticulture industry. These bodies manage Freshcare through an elected board comprised of two supplier and two wholesaler representatives. Freshcare is not government funded, although some financial support has been provided through various State governments. The aim of Freshcare is to integrate standards for producers and provide one, externally audited and industry owned, food safety system that is accepted by packers, wholesalers and retailing organisations. To this end, Freshcare was expected to integrate individual standards and Approved Supplier programs in Australia (Geno, 2001).

In contrast to GlobalGAP, Freshcare is predominately a risk management tool. The standard is a prescriptive code of practice that is based on HACCP, and the base modules of Freshcare are focussed entirely on food safety and quality, with requirements that are considered by producers to be practical and achievable as well as consistent with the level of risks to food safety and quality (Geno, 2001).

The number of horticultural producers certified to Freshcare increased from around 1,000 in 2002 to 3,600 in July 2007 (Figure 2-9). Additional modules for environmental management, occupational health and safety, and biosecurity are currently being developed with the goal of seeking to benchmark against GlobalGAP. This would prove beneficial for the many Australian exporters who currently certify to both Freshcare and GlobalGAP. With certification costs approximately one third that of GlobalGAP, it is likely that the number of Freshcare certified producers will continue to grow if the two schemes are benchmarked.

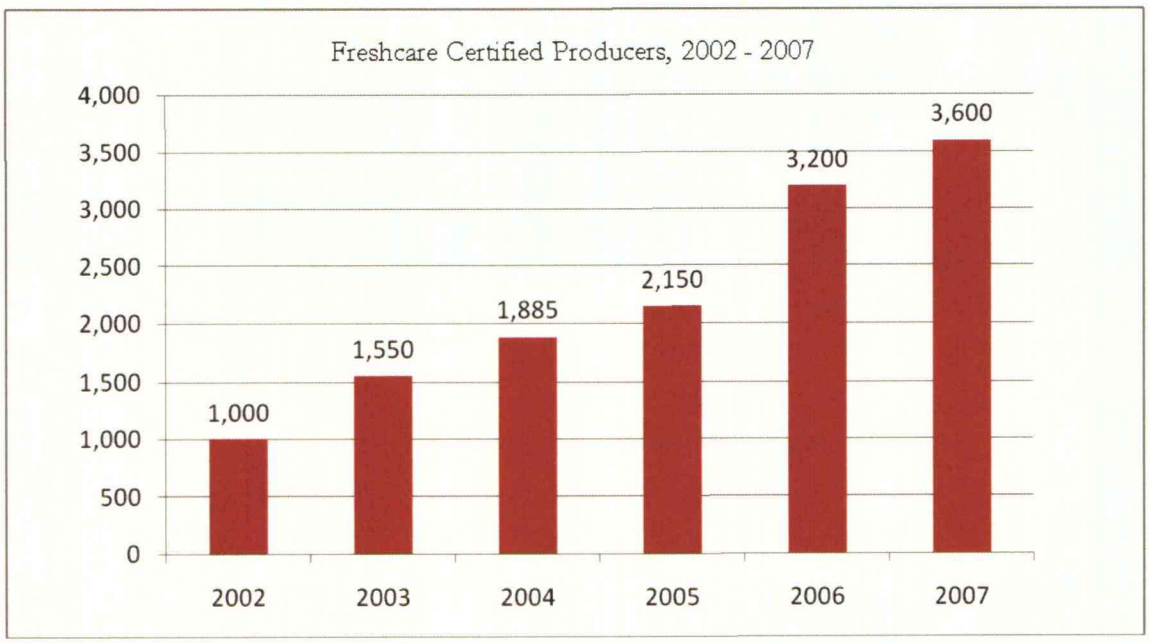

Figure 2-9: Freshcare membership, 2002 – 2005 (Source: adapted from Freshcare, 2004; Hamilton-Bate, personal communication, 17th August, 2006)

2.6 Government Assistance

The Federal Government and key horticultural industry organisations committed in 2005 to provide resources to support horticulture producers in negotiating the changing standards environment. The potential for beneficial public and private sector initiatives in this area had previously been highlighted by the United Nations Industrial Development Organisation (UNIDO), which recommended that government policy should target small to medium sized businesses to assist their upgrading capacity to promote sustainable income growth and participation in the global economy (UNIDO, 2001). Perhaps in recognition of the potential for GlobalGAP to be at the heart of a reconfiguration of the agri-food system, it has been a significant focus of government efforts in Australia. In 2004, the Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) released the "Guidelines for Implementing GlobalGAP for Australian Fresh Fruit and Vegetable Producers" (DAFF, 2004). Developed by a joint industry and government working group, the guidelines aimed to provide a point of reference for Australian producers to gain an understanding of the impacts of GlobalGAP certification, through localised interpretations and explanations of the GlobalGAP control points and compliance criteria. The guidelines made suggestions about the required records, references and other resources. Another government funded group, the National Food Industry Strategy (NFIS), an industry managed organisation that focuses on promoting sustainability and profitability within the food sector has been involved in the GlobalGAP effort. In 2002, NFIS was tasked with promoting the involvement of Australian retailers in GlobalGAP standards development through involvement with the GlobalGAP Sector Committees. More recently, however, the focus of NFIS has shifted to increasing market share for Australian producers within the UK. This may increase the number of Australian producers requiring GlobalGAP certification.

Industry groups and the private sector have also taken steps to assist growers in certifying to GlobalGAP. Horticulture Australia Limited (HAL), a national research, development and marketing organisation for the horticultural industry, established a 'helpdesk' for all supply chain actors to access for assistance with quality standards. HAL has also facilitated GlobalGAP

workshops for auditors to promote a uniform interpretation of standards, and funds research into systems to assist farmers to integrate standards requirements. At the time of writing, however, these initiatives had ceased. Meanwhile, Growcom, a horticulture representative company comprised of members including fruit and vegetable growers and industry organisations, has focussed on value adding for producers that must be certified to GlobalGAP. The organisation developed a Farm Management System to assist growers integrate and implement various standards and legislative requirements.

2.7 Summary

The last two decades have seen a substantial rise in the number of standards applicable for food producers. In addition to an increase in the number of standards, the aim of these standards has shifted significantly. Once based on post-production inspection, today's standards are complex, instructive procedural manuals certified by third party organisations to reassure buyers about the safety and quality of their purchases.

Although there may be social and environmental impetus for the development of some of these standards, in other cases the goals of these standards seem less about achieving defensible outcomes like, for example, the protection of workers rights, or environment stewardship, and more about protection of the interests of those involved in the development of the standard. In the case of GlobalGAP, while the standard claims on the one hand to be about reassuring consumers and underwriting safety and quality through environmental and social stewardship, on closer examination there are few requirements that would suggest this to be the case. Moreover, rather than reassuring consumers, GlobalGAP remains a business to business standard that consumers are unaware of and, unlike other social and or environmental standards, there are no financial benefits accruable to producers. The trends in control points and compliance criteria over the last decade appear to indicate that emphasis has been placed on the safety and quality aspects of the standard at the same time that environmental and social agendas have been pushed aside. Nonetheless, more and more organisations and individual producers are rallying around

GlobalGAP, and the standard appears to be of interest to governments and industry groups that are aiming to support producers through certification to gain access to the high end markets for which GlobalGAP is a requirement.

3 Literature Review

3.1 Introduction

Assessing the evolving impacts of certification on producers is "essential" (Mutersbaugh et al, 2005: 38), if the tenuous and contested wins and losses from certification are to be understood. Thus, with the aim of assessing the impacts of GlobalGAP on producers, this chapter discusses the contribution offered by two key analytical approaches; regulation theory and the actor-oriented approach. These two perspectives offer quite different insights into the restructuring processes occurring within the agri-food system; regulation theory privileging changes occurring at the national and global level, and actor-oriented work focussing on the experiences of individuals and small groups. While these two perspectives seem almost conflicting, combined, they offer important insights into both the reorganisation processes occurring globally and the ways in which farmers strategise to manage this change. Regulation theory illuminates the processes through which private standards have arisen as a regulatory mechanism in the agri-food system. Specifically, this approach examines the contribution of standards and other forms of regulation of new relations of production and consumption that are dominated by an oligopolistic and increasingly transnational retail sector (Jessop, 1992). While regulation theory is useful for identifying the conditions under which private standards have arisen, it has been criticised in the past for detailing "very little about the specifics" (Busch and Bain, 2004:324). Nonetheless, a more modest position has recently been adopted by traditional regulation theorists, and a more carefully grounded framework has been produced (Buttel, 2001; Busch and Bain, 2004). Whereas how and why farmers "enthusiastically enrol" (Busch and Juska, 1997:695) in standards, for example, may have been given little consideration in the past, recent contributions have highlighted that it is farmers that ultimately legitimise these standards (Ransom, 2007). The first half of this chapter draws on key themes of the regulation school approach such as the processes through which private standards have arisen in the global agrifood system, however it should be noted that contributions have been made by authors from a range of schools of social theory. The second grouping of literature that compliments the regulation perspective and that is therefore important for this thesis is the actor-oriented

approach, based on the work of Norman Long (1992; 1996; 1997; 2001). This approach has been adopted to consider how farmers are affected by, and respond to, changes in the global agri-food system. This perspective stresses that that agency is embodied in social relations and can only be effective through them, from which it follows that to understand food standards it is vital to understand how farmers navigate these standards and the other rules and norms that they encounter. While it has not been widely applied to the growing body of food standards literature, this body of work provides useful insights into the ways that producers might negotiate their increasingly complex regulatory environment.

3.2 Globalisation and neo-liberalism

As two concepts that are often 'elided and entangled' (Peck and Tickell, 2002), it is worth briefly considering the meanings of globalisation and neoliberalism for this thesis. Much of the literature informing this thesis refers to one or both of these concepts, and both a referred to throughout this chapter. As Peck and Yeung (2003) note, neo-liberalism and globalisation "...envisage the role of markets in terms of apolitical, benign and integrating forces; both portray governmental bureaucracies and social collectives as impediments to economic progress, and both actively anticipate world-wide processes of upwards convergence – a race to the top – culminating in the establishment of a new orthodoxy or era." However, they are quite different concepts. This research is concerned with globalisation as *a process* of "borderless market extension" (Peck and Yeung, 2003), where the marketplace increasingly operates at an international level, and is characterised by global supply chains and global organisations. Discussions of globalisation along these lines often reference a decline of the political leverage of nation-states, although the extent to which the public sector intervenes in free markets will be discussed later in this chapter. Meanwhile, neo-liberalism is a *political-economic philosophy* that emphasises the efficiency of the free market, criticising the distortions created by public regulation and government intervention. Economically, the neo-liberal agenda endorses, for example, the shift from 'welfare to workfare'; the privatisation or deregulation of utilities and other traditionally state regulated enterprises; and the promotion of regional and global (free) trade (Taylor and Moosa, 2000).

3.3 Understanding change in the agri-food system

Work by regulation theorists, such as Aglietta (1987), Boyer (1990) and Lipietz (1987; 1992), rests on the twin concepts of 'regimes of accumulation' and 'modes of regulation'. Regimes of accumulation refer to the economic structures which support systems of production and consumption. These are associated with modes of regulation; 'a complex of norms, institutions, organizational forms, social networks, and patterns of conduct that promote the reproducibility of the regime of accumulation' (Jessop, 1992: 48). The central tenet of regulation theory is the tendency of capitalism to both stabilise and reach a period of crisis. It is suggested that regimes of accumulation reach a crisis point due to their own internal contradictions. At this point, accumulation is no longer supported by the corresponding mode of regulation, leading to the formation of a new regime of accumulation. This approach considers crises as playing a role in rejuvenating capitalist development, rather than leading to an entire economic crisis.

Prior to World War II, the agri-food sector was a producer-centric network in which the manufacturing industry held power, and retailers served their marketing needs (Burch and Lawrence, 2004; Friedmann and McMicheal, 1989; Gray and Lawrence, 2001). Production was centralised, and although a number of large organisations emerged, these were geographically concentrated and were mostly processors (Bonanno, 1998). This was consolidated after World War II (Bonanno, 1998), a period regulation theorists identify as an intensive Fordist regime of accumulation (Table 3-1) exemplified by three key elements: Taylorist and mechanistic labour processes where production consisted of 'scientific' style mass production of homogenised products; accumulation in the form of sharing out productivity gains from labour processes so that wages rose in tandem with increased productivity; and monopoly regulation within collective bargaining institutions to ensure the acceptance of the Fordist accumulation regime (Lipietz 1992). At the same time, financial incentives such as credit money and welfare ensured mass consumption of the uniform commodities produced. With the goal of economic stability, the post World War II period was characterised by intensive state regulation. Through market regulation, governments were able to reduce transaction costs and increase market efficiency. For agriculture, this meant on the demand side, price supports and import protection through

tariffs, quotas and embargoes; and on the supply side, output based subsidies, minimum price guarantees and other financial assistance (Friedmann and McMichael, 1989).

Economic stability was also a determinate of state support for the promotion of international trade. It was thought this would assist governments to stabilise economic growth and to drive efficiencies in production (Colgan, 2005). The most noteworthy development in this regard was the establishment of the General Agreement on Tariffs and Trade (GATT), which promoted national sovereignty, the stabilisation of nation-states and economies after the war, and the reconstruction of economic growth through international freer trade. It should be noted, however, that the concept of 'free' or 'freer' trade is subjective, and although the GATT encouraged free trade, restrictions to trade through visible and agreed barriers like tariffs and most-favoured nation agreements were accepted. In addition, there existed a number of non-tariff or non-traditional barriers that were addressed through, for example, the Sanitary and Phytosanitary Agreement and the Technical Barriers to Trade agreement, and there are numerous examples of the manipulation of these agreements by nation-states aiming to protect local industries (Bonanno and Constance, 1996).

Table 3-1: Phases of regulation and accumulation (Source: Tickell and Peck, 1992)

	To 1914	1918-1939	1945-73	1974 to present
Accumulation system	Extensive	Emerging intensive	Intensive (Fordist)	Emerging (flexible)
Mode of regulation	Competitive	Crisis of competitive mode	Monopolistic (Fordist-Keynesian mode)	Crisis of monopolistic mode Emerging Neo-competitive? Neo-conservative? Neo-corporatist? Neoliberal?

However, insufficient gains in productivity led to a failure in profit and accumulation growth, and the labour cost of production increased. Together, this led to an inability to fund the increasing requirements of the welfare state. The economic crisis that followed brought to a

head waning support for Keynesian style economic policies characterised by state stimulation of economic growth and stability, and governments began looking to neoliberal policies for economic stability (Jessop, 2002). The subsumption of the GATT, a trade treaty, within the World Trade Organisation (WTO), an independent authority, reflected a move from prioritising the economic stabilisation of nation-states through freer trade to the freeing up of trade to allow neoliberal market rule (Peine and McMichael, 2006).

The authority of the WTO began to extend well beyond trade related activities to address foreign investment rules, intellectual property and domestic regulations (Busch and Bain, 2004). In this capacity, the WTO has contributed to the transformation of markets by promoting non-intervention social and environmental policies and restricting the use of tariff and quantity barriers to trade. At this point it is worth noting that while much ado is made about 'free markets', the 'freeing up' of trade and so on, markets, and entire economies require considerable intervention to ensure their longevity. Tickell and Peck (2003:167) suggest that many discourses of neo-liberalism provide a "deceptively simple" narrative about the "superiority" of markets, neglecting to acknowledge the control and regulation required to make, steer and police markets, while Raikes, Jensen and Ponte (2000) draw attention to the 25,000 pages of 'de-regulations' in the final draft of the Uruguay Round Agreements.

In spite of this, a new "era of post-national regulation" has emerged (McMichael, 1994:282). Under this system, state-based regulation of food production is increasingly a secondary concern for producers, with regulation characterised by a dominance of the private sector in roles traditionally carried out by the nation-state (Burch and Lawrence, 2004). This new, post-national regulation provides an interesting focal point because unlike the standards promulgated by nation-states, the regulation of food production and consumption by private interest groups creates very similar trade barriers to those that are in constant dispute at the WTO. Indeed, Busch and Bain (2004) suggest that the removal of tariffs and quotas from international trade has promoted greater private regulation of the agri-food system through the institutionalisation of international private standards in new WTO agreements.

3.4 The rise of private standards

The expansion and growth of global corporations is vital in understanding the implications of global restructuring. Transnational corporations (TNCs) are dominant actors in creating a food system based on global sourcing (Heffernan and Constance, 1994) and the globalisation of agriculture and food production has been shaped to a large extent by the emergence of TNCs (Friedland, 1991). For the retailing sector, the globalisation of markets underwritten by international trade agreements combined with international competition for investment, and decentralisation of finance led to increased competition between geographically disperse labour markets, regulatory environments and resources, and this allowed organisations to search for the most convenient factors of production (Bonanno, 2004). Unlimited by country of origin and able to benefit from lower trade barriers, international foreign investment through global input sourcing and supply chain organisation, and decreased government intervention in labour markets, many large organisations began to organise production chains at a global level. Global level supply chains meant acquiring firms, establishing affiliates, or forging strategic alliances with other organisations at a global level, and these changes fuelled an exponential growth in the number of transnational corporations (TNCs) to the extent that in 2000, 51 of the world's largest 100 economic entities were corporations (World Bank, 2000).

The ability to organise supply chains at a global level and realise economies of scale led to extensive horizontal consolidation between retailers, shifting the industry towards a more oligopolistic market structure. In the United States, the market share of the top five retailers increased between 1996 and 2000 from 26 to 38 per cent. European retailers displayed a similar trend, with the top five retailers almost doubling their market share over the same period. In Australia the top two retailers currently maintain a market share of 79 percent (PWC, 2007). The diminishing numbers of retailers were able to shift the balance of power in supply chains and, by the 1990s, had displaced manufacturers in the role of organising supply chains (Burch and Lawrence, 2004; Busch and Bain, 2004:328; Friedland, 1991).

Highly visible to consumers, competing increasingly on quality as well as price, and now with increased power within the supply chain, the retailing sector had the ability as well as multiple

motivations for becoming involved in the regulation of supply chains. While individual standards may have differing and quite specific goals, broadly, the various motivations for the development of private standards are based on the need to minimise supply chain risk and allay a host of consumer concerns. A series of well-publicised food scares in developed countries, debates about growth hormones, agro-chemical residues, food additives and 'technological risks' (Beck, 1992) such as genetic modification and irradiation served to stimulate consumer concerns about food safety as well as highlight the increasing global nature of supply chains, with food produced, in some cases, in conditions not acceptable to consumers in industrialised nations.

In addition to allaying food safety concerns, production and quality standards fill a useful role for retailers in several ways. First, consumers have become increasingly focussed on an array of production attributes, such as animal welfare, worker health and safety and environmental management. These attributes are unable to be conveyed through post production inspection, and for retailers wishing to demonstrate their corporate responsibility through supply chains, standards provide a mechanism to ensure the desired production techniques are followed. In this context, standards are also able to initiate niche markets, such as 'Fair Trade', 'Rainforest Alliance and so on. This has the potential to promote and support production practices that are more socially and environmentally responsible (Hatanaka, Bain and Busch, 2005) although, in practice there is contestation about the extent to which retailer-led certification programs achieve this and concerns regarding the corporate interests which define socially and environmentally responsible production (Campbell, 2005; Rosin, 2008; Van der grijp et al, 2005).

Second, generic brands and fresh produce sections in supermarkets are increasingly important (Busch and Bain, 2004). They are key sites of competition for retailers, who seek to source high quality produce at the lowest cost (Burch and Lawrence, 2004). In the UK, for example, generic grocery brands have a 30 per cent market share and there is strong competition and supermarket loyalty based on these brands (Jensen and Webster, 2006). Although the Australian market share for generic brands is currently significantly less at around 12 per cent (Jensen and Webster, 2006), major retailers have made commitments to replicate the British trend in the future. Coles Metway

have announced plans to boost its' private label market share to between 30 and 40 percent by the end of 2008, while Woolworths have recently introduced a premium generic brand to supplement their low cost generic label and compete with other proprietary brands. However, generic brands and fresh produce are also sites of risk; food scares or low quality produce from the view of consumers is the jurisdiction of retailing organisations rather than manufacturers. Thus, the protection of these brands is vital for retailers. Food quality and process standards mitigate some risk for retailers in branding generic produce by allowing for stipulation of precise quality and production procedures, while offsetting responsibility onto other supply chain actors.

Third, governments are unable to regulate food safety and quality as supply chains increasingly incorporate international suppliers. Yet global sourcing means retailers procure produce from suppliers operating in countries where national or enforcement of food standards may be inadequate or missing (Hatanaka, Bain and Busch, 2005), and TNCs have difficulty in regulating safety and quality in these complex supply chains. Indeed, several studies based in the developing world have suggested that a key motivation for the development and implementation of private standards by the retailing sector can be attributed to a lack of adequate public standards. Henson and Reardon (2005) for example found that the development of private standards was related to a gap in public safety standards. The development of private standards by retailers provides a mechanism for retailers to maintain their own minimum production standards. Furthermore, even in countries with adequate State involvement in food control, national regulatory bodies are unable to maintain pace with new developments in the production of food (Sporleder and Goldsmith, 2001). A further incentive for retailers to develop private standards in this environment, Codron et al (2005) found that when public regulations are considered 'weak', marketing produce that is guaranteed to a standard above publicly developed standards may increase profits.

Fourth, for almost two decades, retailers have been faced with an increase in liability in the case of food scares and other food safety issues. The British government in 1990 introduced 'due diligence' to the Food Safety Act which required, for the first time, that retailers take all reasonable precautions to ensure the safety of food sold in their retail outlets. The imposition of food standards by retailers onto downstream food producers allows retailing organisations

charged under the Food Safety Act to be acquitted of an offence if they can prove all reasonable precautions were taken and due diligence was exercised to avoid committing an offence. Although Britain is currently one of few countries with specific laws regarding 'due diligence' in food safety legislation, retailers anticipated that other countries would follow the British lead, and pre-empted this by incorporating standards that would limit their liability under such legislation.

A study conducted in Europe suggested that for key European retailers, the impetus for involvement in food safety and quality regulation is entirely reputation driven (Fulponi, 2006). This may, in part, explain why, in contrast with openly expressed standards such as Fair Trade and Marine Stewardship that promote greater civil society participation in the regulation of food production (Bonanno and Constance, 1998; Murdoch, 2000), standards like GlobalGAP are not expressed to consumers and are unlikely to raise awareness about production practices. The inclusion of environmental and social attributes is certainly beneficial for the 'global credibility' of retailing organisations (Campbell, 2005; Reardon et al, 2001), and retailers continue to frame themselves as key actors in maintaining 'responsible' food production standards. In practice, this is achieved through displacing this responsibility onto downstream supply chain actors through production standards,

There is little doubt that the buying power and concentration of retailers implementing these standards will, and indeed already has, standardised food production between producers. For example, the Woolworths Quality Assured standard requires Imperial mandarins to be visually "with bright bloom; waxed surface; intact buttons, not torn or missing; thin, easy-to-peel skin; segments easy to separate, <5% of dryness in consignment; no foreign matter" with shape "squat to slightly round" (Appendix C). They must also be produced under a specific production standard, such as Freshcare or GlobalGAP. Private food standards may also dictate variety, convenience and year-round supply (Busch and Bain, 2004), and these standards enable retailers to capture higher prices for 'quality' produce, as well as encourage consumer loyalty (Nilsson, Tuncer and Thidell, 2004). With a significant share of the Australian retail market and with comparable standards imposed by retailers controlling 79 percent of the retail market (PWC, 2007) producers generally must conform to these standards if they wish to supply leading retailers.

This is not to predict the death of small producers or those unable to certify; producers that are excluded from global markets may continue or begin to interact instead with local 'spot' markets and smaller retailers that do not require the same standards for food safety and quality. In conceptualising standards, several commentators envisaged the existence of small-scale, fringe retailers that are not kept to the same quality standards operating alongside core retailers, and these smaller retailers may provide an opportunity for non-certified producers to remain in the market (Farina, 2002). In this case, producers would shift to these marginal markets and a hierarchy of suppliers governed by private standards (Fulponi, 2006) or a system comprised of 'winners' and 'losers' (Busch and Bain, 2004) may emerge. Though evidence exists in some cases of core retailers continuing to trade with non-certified producers (Henson and Reardon, 2005), this is less likely to occur as certification for producers becomes less about competitive advantage and more a requirement simply to remain in the market. Nonetheless, these changes have created a very different global food production environment, and with the proliferation of private standards so significant that they have been said to be the predominant driver of the agrifood system (Hatanaka, Bain and Busch, 2005; Reardon and Farina, 2001; Busch and Bain, 2004; Henson and Reardon, 2005), producers are likely to experience substantial impacts.

However, the changes outlined above have not brought about uniform responses and there is a significant body of work that deals with the alternate food production systems that have concurrently grown under the changing economic conditions outlined above. While the onslaught of private food standards is promoting standardisation of food production for many producers, there are also growing niche markets. Organic production for example is expanding to the extent that it is not adequately described as a niche market, and, while this is not wholly a result of standardisation in food production, there is some evidence to suggest that some producers enter organic supply chains as a form of opposition against increasing standardisation and corporate control of food production (Dimara, Petrou and Skuras, 2003; Gonzalez and Nigh, 2005). Furthermore, there is a growing body of work on standards that are active in niche markets such as Fair Trade, Marine Stewardship and retailer generic brands (Bonanno, 2004; Bonanno and Constance, 1996; Burch and Lawrence, 2004; Raynolds, 2000; 2002).

It is worth noting that while private standards may be viewed as evidence of the growing power of retailers in organising supply chains, other actors are also involved, and in this way, private standards should be viewed as a site of contestation. For example, with little or no state intervention in the regulation of most food production and distribution, and growing public mistrust in professional self-regulation (Campbell et al, 2006) third party certifiers also play a key role in maintaining the conventions behind private standards. Although these actors are organisationally independent, they too may be embedded in social and political networks and seek to promote their own agendas (Hatanaka and Busch, 2008).

3.5 The actor-oriented approach

While regulation theory has contributed a great deal regarding structural aspects of political and economic changes, it has been suggested that early regulationist interpretations of capitalist development 'provide an inadequate conceptual architecture for analyses of the late twentieth century agro-food system' (Goodman and Watts, 1994:5). These approaches tended to 'help explain the broad conditions under which certain processes occur but tell very little about the specifics (Busch and Bain, 2004:324), ignoring cultural norms and local implications. Later regulation theorists have moderated their approach, and this has led to a more 'micro-level, neo-regulationist framework' (Buttel, 2001:26) that accounts for niche markets and other trends that are in some cases at odds with broader shifts within the agrifood system. Nonetheless, with the key concerns of regulation theory examining macro-level changes, the actor-approach is employed to explore in detail the differences in responses of farmers to private standards and identify how some farmers strategise to counteract at least some of the influence sought by transnational organisations in their imposition of these standards. Actor oriented approaches start from the point of view that change can not be entirely based on external factors and determinants due to different outcomes in actor response, and begin to explain a little more about how farmers are able to make differing decisions.

Developed in response to a perceived failure of structural critiques of social development to adequately explain heterogeneity in social processes (Long, 2001), the underlying premise of the

actor-perspective is that different social forms arise under the same or similar circumstances. These differences reflect the differences in the ways actors interpret and respond to the situations they encounter, and the social patterns that arise are in part the creation of actors themselves (Long, 2001). The significance of external interventions and their importance for actors is taken into consideration; however, it is suggested that when they enter the 'lifeworlds' of actors, they will be mediated and transformed by these actors. Thus:

> Social actors must not be depicted as simply disembodied social categories (based on class or some other classificatory criteria) or passive recipients of intervention, but as *active participants who process information and strategise in their dealings* with various local actors as well as with outside institutions and personnel (Long, 2001:13).

Actor oriented approaches analyse how knowledge is constructed within social situations. They highlight the significance of everyday experience and strategy, and emphasise the importance of agency for negotiating change. From this perspective, agency is the capacity of actors to solve problems, structure their environments and process information, and a person with agency is able to succeed in devising ways of coping with life, even under extreme coercion (Long, 2001). However, "single individuals are not the only entities that reach decisions, act accordingly and monitor outcomes" (Long, 2001:16). Social groups also have means of reaching and formulating decisions and of acting on at least some of them. Entities such as agencies, groups of actors, and organisations can, therefore, be attributed agency (Hindess, 1986). Agency can also be viewed as a social construct, in that it is made meaningful by others, and is constructed by individuals or groups through social interactions or interfaces, and this determines how actors behave or negotiate in the face of change (Long, 2001).

Giving voice to the diversity of actions and responses of actors, this approach is critical of uniform interpretations of globalisation. Instead, Long views globalisation as "the rapid dissemination of scientific knowledge and technology, culture and communications, the restructuring of work, industry and economic life, and the fragmentation and reorganization of power domains leading to the emergence of new social and political identities" (Long, 1996: 37). For example, Long brings attention to the sophisticated regulatory conditions and regulations required to promote neo-liberalism and 'de-regulation', and much is undertaken by non-state

actors. Long (1996) couples globalisation with the concept of localisation, in that knowledge and organisation is modifying in response to globalisation, bringing about new forms of localisation.

Also important for this thesis is the actor-oriented concept of structure as an ongoing negotiated and socially constructed process of actions. Composed of networks of enabling and constraining units which may be human or non human (Long, 1997), it is the outcome of a combination of 'interlocking actors projects' (Long and Van der Ploeg, 1995). Due to the internal heterogeneity of structure, it may look and act differently for the different actors that interact with it (Long, 1997:112). Thus, structure is:

> ...an extremely fluid set of emergent properties, which, on the one hand, results from the interlocking and/or distantiation of various actors' projects, while on the other, it functions as an important point of reference for the further elaboration, negotiation, and confrontation of actors' projects (Long and Van der Ploeg, 1994: 81, in Higgins, 2006:53).

It is through the meanings assigned to structure by various actors that structures become influential. Within structures, power is not possessed or accumulated, but emerges from social processes. In this way, there is no zero-sum game where some actors or structures exercise power and others have none (Long, 2001). Long borrows from Latour (1986) in suggesting that the ability to influence others or pass on commands is dependant on the actions of chains or networks of agents who translate it according to their own projects. Power in this context depends on the emergence of a network of actors who become involved in the project of another actor or group of actors. It follows that power does not simply result from the control of market or economic processes, nor is power a consequence of power structures external to the marketplace. Long (2001) suggests that such interpretations of power fall short because they focus on how external influences build power relations. Instead, Long (2001:92) suggests, we should consider more closely, "the embedding of social, cultural and political relationships and resources within the social fabric of commodity relations in specific market places and at the sites of production and consumption".

Within the agri-food literature this has been applied to understanding the role of farmers as participants in change, particularly in response to policy interventions. In this context, farmers

are construed as agents with the ability to exercise countervailing power to structural interventions. By showing there is considerable difference in farming styles among producers operating in similar structural environments, it is suggested that to some extent, producers retain varying degrees of agency and thereby, capacity to control their environment. This is in contrast to views of farmers as 'survivors' in a tide of political and economic rationalism. Therefore, much of the literature addresses farmer strategies and responses to interventions at a local level, with detail provided on strategies and networks that aim to counteract power and "reproduce their enterprises in the face of the homogenising tendencies of advanced capitalism" (Buttel, 2001:172).

3.6 Producer implications

In applying the work of Long and others to a study of private standards, the development of private standards and their implementation can be viewed as a socially constructed and negotiated process, rather than simply 'the execution of an already-specified plan of action with behavioural outcomes" (Long, 2001:25). Privately developed food standards are not neutral, market based instruments. When entered into the lifeworlds of farmers, they draw the 'projects' of farmers into complex international and local power relations. In this context, at the same time, farmers are not passive recipients of externally implemented private food standards as a means of ordering their production systems. They are active participants who process information and strategise in their dealings with standards, as well as with other actors involved in the setting, monitoring and evaluation processes behind private standards and certification. Moreover, as these standards enter the lifeworlds of farmers, and farmers interact with them, standards become part of farmers' response strategy. Viewing farmers as actors with agency and an ability to respond to externally imposed change does not make light of the fact that the responses of farmers are shaped by external processes. Indeed, broader processes of trade restructuring and the increasingly oligopolistic nature of the food retailing industry have had important consequences that require food producers to make difficult choices and possibly to pursue alternate strategies.

Thus, while the promotion of free trade ideals has led to a reduction in traditional barriers to exchange, a new assortment of conditions have arisen driven largely by globalisation and neo-

liberalism, and although the rhetoric around neoliberal markets refers to 'freeing' trade from regulation and 'opening' markets to purely market driven supply and demand, in reality, producers face an increasing array of regulatory requirements. Nonetheless, as previously noted, studies have found evidence of farmer agency, with producers adjusting to this changing environment. These producers have been found so far to have increased livelihood options through participation in the supply chains of major retailers (Hatanaka, Bain and Busch, 2005). Producers that can afford to make the changes required may also have access to a wider range of marketing options. Other examples include the development of strategic alliances between groups of producers (Bain and Busch, 2004; Busch and Bain, 2004).

However, there are many producers that are likely to be excluded from this group. The costs of certification alone may prove prohibitive for many producers, and when coupled with requirements such as computerisation, may prove entirely unattainable (Farina and Reardon, 2000). Indeed, Hatanaka, Bain and Busch (2005) found that, with no accredited GlobalGAP certifier in the country, producers seeking certification in Ghana would be required to use certifiers from the UK or Europe, at considerable expense. Thus, while farmers successful at negotiating private standards like GlobalGAP must have the capacity to strategise, there are external influences that may restrain farmers somewhat from taking particular paths of action. Nonetheless, while it is likely that the potential range of implications for producers who have the technical and financial capital to certify will be less severe, there is evidence to suggest that many will struggle under this new system. At the very least, those who do choose to pursue potentially costly certification will absorb the costs as part of an increasing cost-price squeeze (Bain, Deaton and Busch, 2005; Baines and Davies, 2000) with broader implications than financial pressure.

3.7 Summary

Regulation theory has provided a useful point from which to contextualise the economic and regulatory changes that have created an environment in which retailers have incentive and ability to exert influence through the use of privately developed standards. Contributions to this approach explain how the neoliberal agendas pursued by many developed nations have

created space within the regulatory sphere which has been taken up by global organisations attempting to compete in an increasingly competitive operating environment. However, producers remain largely absent from conceptualisations of private standards. The implications of retailer-led standards for producers are likely to be varied, and as yet, are not well understood. Thus, it is certainly timely to consider questions about the impacts of private standards. Do retailer-led standards really change the production practices of producers to be (more) socially and environmentally responsible? How will producers respond to the increasing technical requirements of retailer-led standards like computerisation? How many producers will remain in industries that are increasing in administrative requirements? How significant will the financial burden be for those who pursue certification? How will producers perceive privately developed standards? Will they form their own networks to support one another in attaining certification? The actor approach provides a framework for the consideration of producers, empowering them and positing that they are not passive recipients of the changes occurring around them. It is from this perspective that this thesis will proceed. The following chapter details the case study and methodological approach of this thesis.

4 Methods and Methodology

4.1 Introduction

The success of research is ultimately dependent on both the collection and interpretation of data. As a constructed interpretation, qualitative research findings require a comprehensive methodological assessment, rather than a narrative of how observations were gathered. The data presented in this study were collected to determine the realities of horticultural production during and after certification to GlobalGAP. More specifically, the purpose of this research was to determine the extent to which private standards represent a relinquishing of farmer control over production processes within the agri-food system. This chapter begins with an overview of the global citrus industry and a discussion of the case study organisation, Gayndah Packers. This is followed by an outline of the research paradigm that underpins this study, the methods and methodology, and a discussion of the subjective role of the researcher in constructing the research interpretation. Finally, this chapter concludes with a brief discussion of the possible limitations of the methods chosen.

4.2 The Citrus Industry

The Australian citrus industry is comprised of several key commodity sectors which are usually combined for industry reporting; valencia oranges, predominately used for juice; navel oranges, predominately table fruit; mandarins; and lemons, limes and grapefruit. Currently 2,800 producers manage about 29,780 hectares of mostly irrigated citrus plantings; of which 4,203 hectares were planted to mandarins in 2003 (Australian Citrus Growers 2003). About 65 percent of the total land dedicated to mandarin production is located in the Central Burnett and Emerald regions of Queensland, with a further 16 and 13 percent located in the Riverland (NSW) and the Murray Valley respectively. Over the last five years, total citrus production has averaged at about 680,000 tonnes. However, there has been a slight decrease in production across all varieties in the

last three years. Mandarin, the focus of this study, has decreased from 121,000 tonnes in 2004/05 to 106,000 tonnes (estimate) in 2007/08 (Australian Citrus Growers, 2008)

Australia is not a low-cost citrus producer, and the competitive advantage of Australian citrus lies in providing high quality, counter-seasonal fruit grown in a 'natural, clean and fresh' environment. Nonetheless, industry profitability has fallen in recent years, with growers indicating that citrus prices in some cases are lower than production costs. Citrus growers have thus declined in number by 19 percent from 3,444 in 2000 to 2,800 in 2006. The industry suffers from low economies of scale, with a large number of small growers, two thirds of whom have less than 10 hectares planted to citrus; increasing barriers to market entry such as costly certification schemes; and rising costs and decreasing availability of guaranteed water. Thus, the key focus for the industry is on stimulating demand for Australian citrus and improving competitiveness through efficiency gains (Australian Citrus Growers, 2005).

In 2004, the Australian citrus industry suffered a major setback to these goals with the discovery of citrus canker in Emerald, Central Queensland. Canker is an exotic, contagious disease caused by bacteria that leads to lesions on the stem, leaves and fruit. The fruit is safe to eat. However, the disease causes a reduction in fruit quality and quantity. The recent outbreak and subsequent movement controls affected all producers in Queensland for a 6 month period during the latter part of 2004. Although the outbreak was limited to the Emerald Pest Quarantine Area (EPQA), movement controls were applied to high-risk materials produced within Queensland. In the initial period, fruit and host plants from within Queensland could be exported to countries where citrus canker existed, but could not be sold in Australia except within the EPQA. Once movement controls were lifted for all areas of Queensland except the EPQA, producers were able to export citrus in Australia and globally. While producers reported an increase in profits during this time, due to an increase in citrus price on the domestic market, the peak body representing the citrus industry suggests this event had detrimental implications for the perception of Australian citrus on the global market.

4.2.1 Global citrus trade

The Australian citrus industry is the largest fresh fruit exporter of the Australian horticulture industries. However, globally, Australia is a small producer, accounting for only 1.6 per cent of global trade, or around 180,000 tonnes of citrus per annum. The focus for the Australian industry is on providing off-season production for the key export markets of Asia and the USA (Table 4-1).

Table 4-1: 2000/01 Export markets (source: Australian Citrus Growers, 2003)

Region	Tonnes	Region	Tonnes
Asia		*America*	
Brunei	50	USA	2,499
Hong Kong	7,367	Canada	835
Indonesia	4,862	**Total**	**3,334**
Japan	1,778	*Pacific*	
Malaysia	1,366	New Caledonia	12
Singapore	2,260	New Zealand	1,342
Other Asia	653	Papua New Guinea	4
Total	**18,336**	Other Pacific	107
Middle East		**Total**	**1,465**
Kuwait	40	*Europe*	
Sri Lanka	68	United Kingdom	49
Other Middle East	574	Other Europe	10
Total	**682**	**Total**	**59**

The export markets are highly profitable for Australian producers, with a quarter of the fruit produced representing about half of the total production value. In recent years, new mandarin plantings in South Africa, South America and China have led to an average increase in production of about 2 percent per year, and, while mandarin consumption is increasing in developing countries, growth has slowed in developed countries. Thus, large producing nations have tended to export higher proportions of their produce, flooding the market and increasing competition between producers (Spreen, 2001). Simultaneously, the emergence of high quality production

from newly developed southern hemisphere suppliers has placed increased pressure on the traditional export markets of Asia and the USA. This has created an impetus for citrus producers to remain competitive through, for example, certification to schemes such as GlobalGAP that facilitate market access.

4.2.2 Gayndah Packers

Gayndah Packers is a citrus cooperative located in Gayndah, South Eastern Queensland. Gayndah Packers originated in 1971 from a group of about eight orchardists. Membership has since trebled to around thirty member–shareholders. Gayndah Packers, trading under the brand name Gaypak, is Australia's largest mandarin producer. Situated on a 90 kilometre reach of the Burnett River from Gayndah to Mundubbera, member property sizes range from 3 to 300 hectares. Members pay a one-off joining fee and an annual levy per hectare of their property farmed to citrus, which entitles each member to an equal vote. Between 30 and 40 per cent of Gayndah Packers produce is exported, with key markets in Japan, Hong Kong, Singapore and Canada. There are also smaller markets in Europe, Indonesia, China and Dubai. The remaining produce is sold in Australia, and Gaypak produce accounts for about 26 per cent of mandarins on the domestic market. The main varieties grown under the Gaypak brand are Imperial and Murcott mandarins. Cooperative members also produce grapefruit, lemons and navel oranges in small quantities. The Cooperative is comprised of a member-operated Board of Directors and a Quality Control manager, who is responsible for assisting growers with the implementation of quality assurance schemes. Within the Cooperative, producers bear the responsibility for growing fruit until the time it is picked. Once the fruit is picked, it is shipped to the Gayndah Packers packing shed to be treated, sorted, packed and transported to market.

The Cooperative gained HACCP certification in the late-1990s. In around 1996/97, the cooperative certified to ISO9001:1994, and has since upgraded to ISO9001:2000. The cooperative certified to Freshcare in 2002. In 2004, the then quality manager of Gayndah

Packers recommended certifying to GlobalGAP to access the lucrative European market. Orchardists expressed concerns about the low European market prices in comparison with the more lucrative Asian markets, as well as concerns about the durability of the Imperial variety of mandarin in the long transportation process to Europe. However, Gayndah Packers pursued GlobalGAP certification, largely due to the likelihood of the scheme spreading to other regions. Gayndah Packers also wished to avoid being 'locked' into the Australian market.

The GlobalGAP certification period at Gaypak lasted 12 months, during which orchardists underwent a 'self-certification' process. This involved examining the GlobalGAP protocol, and making business changes where necessary. Members of Gayndah Packers have undergone two audits since gaining GlobalGAP certification. The first was conducted during the off-season, the second audit carried out during harvest season. Field research conducted with about half the members of Gayndah Packers highlighted a range of changes due to GlobalGAP certification. These are not only issues for growers, but for the entire supply chain.

4.3 Methodology

Qualitative research methods have a long history within sociological and anthropological inquiry. Researchers diverge on precise phases or eras, yet there is some consensus that early qualitative research in the form of ethnography arose in the 15th century in response to the discovery of culturally and ethnically diverse populations located throughout the world (Vidich and Lyman, 2003), although qualitative research methods were not established within prominent sociological discourse until the 1920s. Within a decade, however, a 'scientific sociology' based on quantification and statistics was prioritised and for the next several decades the discipline pursued 'scientific status' through the use of quantitative methods. So prevalent was this shift that publishing in key journals was difficult without "a sea of equations decorating ones argument" (Fielding, 2005). It was not until the mid-1960s that qualitative methodologies re-emerged within sociology, and over the last two decades in

particular, researchers have sought to legitimise these methods within sociological inquiry. This has been successful to the extent that in 2004, the British Economic and Social Research Council expressed concern about a lack of quantitative research within the social sciences.

Following the sociological trend, this research took a qualitative investigative approach. This aligned with the underlying research paradigm, constructivism, and the actor-oriented approach. Research paradigms can be defined as 'a basic set of beliefs that guide action, whether the everyday garden variety or action taken in connection with a disciplined inquiry' (Guba, 1992:17). Taking a constructivist view suggested that there were no single, rational and objective realities that could be determined and assessed. Instead, individual actors construct their own realities through their experiences, making sense of their worlds. This is similar to the actor-oriented approach, which "entails recognising the 'multiple realities' and diverse social practices of various actors" (Long, 1992, p.5). In the case of agriculture:

> Producers and households actively construct, with the limits they face, their own patterns of farm and household organisation and their own ways of dealing with intervening agencies (Long 2001:26)

As such, qualitative techniques that explore the insights, interpretations and understandings of individual actors were appropriate for this study. Primarily concerned with gathering actor's insights on the day to day realities of navigating a changing and complex business environment, and one which, by the nature of farming, pervades every aspect of their lives, in-depth interviews were selected as the primary tool for data collection. May (2001:120) suggests this is a useful method undertaken by social researchers in "yielding insights into people's experiences, opinions, values, aspirations, attitudes and feelings", and the data collected is a window through which to interpret and understand the experiences of respondents.

A key concern in conducting this research was ensuring rigour throughout the data collection and interpretation process. According to some, a lack of rigour within qualitative

research has resulted in significant criticism of qualitative approaches, in particular from quantitative practitioners (Devine and Heath, 1999). For this reason, methods were prioritised that considered validity and reliability, to achieve the dual goals of producing outcomes that could be analysed by other researchers leading to similar conclusions, and of producing a plausible and coherent explanation of the phenomenon under scrutiny (Mays and Pope, 1995). This research was conducted on the foundation of a small body of literature, as the sociology of private standards in the agri-food system is yet to be analysed in detail (Campbell, 2005). Due to the small body of work on this subject, a narrowly defined hypothesis would be more likely to mask than identify relationships between the various actors. For this reason, an exploratory approach was undertaken, which sought to "find out how people get along in the setting under question, what meanings they give to their actions, and what issues concern them. The goal was to learn 'what is going on here?' and to investigate social phenomena without explicit exceptions." (Schutt, 2006). In doing so, semi-structured interviews were undertaken with research participants. This enabled the researcher to take a flexible approach to the subjects discussed, and meant participants could focus on what they perceived to be the main issues regarding GlobalGAP and other private standards.

4.4 Utilising a case study

For the purpose of examining in detail the events that led to certification within the Cooperative as well as the implications of this decision, Gayndah Packers was used as a case study. This allowed for "an intensive, holistic description and analysis of a single instance, phenomenon, or social unit" (Merriam 1998: 27) and provided an opportunity to conduct a detailed exploration of and around the boundary of respondents' experiences of gaining certification by giving attention to their individual contexts and decisions. Using a cooperative provided an extra dimension to this exploration, because decision-making about certification and the resulting impacts were communal. Gayndah Packers was selected as an appropriate study based on accessibility to certified producers. In Australia at the time of

commencing this study, few producers were GlobalGAP certified. Using a cooperative that had

Criticisms of the case study approach, and indeed many qualitative studies, include both their generalisability and validity. On generalisability, the key point is that this study was not undertaken to elicit broad hypotheses that can be widely applied to all producers undergoing GlobalGAP certification, but to understand the case at hand in its complexity and its entirety, and determine whether general understandings of the implications of certification to private standards are supported. The mission of qualitative research in this context is to give meaning and understanding to specific events, rather than to predict outcomes. As Merriam (1998: 32) suggests, "discovering important features, developing an understanding of them, and conceptualising them for further study, are often best achieved through the case study strategy". Construct validity is also problematic in case study research, and has been a source of criticism because of potential investigator subjectivity. Yin (1994) suggests using multiple sources of evidence is a possible solution for issues around validity, and it was this approach that was taken through triangulating data collected within the Cooperative with both data from Cooperative management and Cooperative members, and with external parties that had worked with Cooperative members. This aided in developing a confirmatory edifice. Both generalisability and validity are also impacted by the subjectivity of the researcher, discussed below (Yin, 1994).

4.5 Subjectivity / reflexivity

An important factor in qualitative methodologies is consideration of the influence of the researcher in shaping the final research outcomes. For sociologists, reflexivity is critical to the point that it has been said that as a discipline that is "born out of concern to understand the other, it is nevertheless committed to an understanding of the self" (Vidich and Lyman, 2003:56). Yet often, the researcher is 'obscured in social science texts, protecting privilege, securing distance, and laminating the contradictions' (Schutt, 2006). In recent years, debate

over the collection of so-called 'objective data' has, to some extent, been squared through the recognition that even apparently objective information can be prone to subjective interpretation. However, more so than ever before, it is vital to be aware of the many roles and places through which researchers may view the world, and how this may influence research outcomes. In fact, it has been suggested that reflexivity has the ability to free academics from "their illusions – and first of all from the illusion that they do not have any, especially about themselves" (Bourdieu, 1996:195). Therefore, this research will provide a contextual overview of the field research through the eyes of the researcher. Keeping in mind that briefly outlining autobiographical or personal information 'sanitises' the researcher from the text, while providing an abundance of information on the researchers subjectivities has the potential to 'silence' informants (Fine et al, 2004:170), the subjectivities of the researcher are outlined briefly, though the emphasis remains on the responses of participants.

Initially the researcher was treated with scepticism from several participants who expressed concern about the independence of this study and the potential for responses to be communicated to auditors or other members of Gayndah Packers. These respondents generally changed disposition once the independence of the research and researcher was established. An explanation of the formal institutional and governmental ethical requirements helped to reassure respondents. To environmentally focussed questions, particularly those regarding water use, many participants responded defensively.

The researcher appeared to be generally received as an outsider during the interview process. As a 'woman', 'from the city', interviewees most likely responded to the researcher differently to the way they would respond to the same questions being asked by a farmer, a male researcher, or even a researcher 'from the country'. A further distinction in this regard was apparent from those who understood the researcher to be a student. Many respondents appeared to relax when advised that the researcher was a student rather than an 'academic'. Respondents also appeared more willing to participate when advised that the research contributed to a formal program of research. However, the researcher noted that the informant participant statement did formalise the proceedings, and 'strip away the illusions

of friendship and reciprocity' (Fine et al, 2004:178). While all care was taken to reassure respondents to speak openly about their experiences, respondents were often more open during the informal parts of interviews, like walking to the car or making tea. For example, several respondents made comments during these times like, "off the record...", or "now that's over, can I say...".

4.6 Field Research

As noted above, at the heart of this approach was in-depth interviews. This research intended to use Gayndah Packers, a farmers' citrus cooperative as the lead agency to identify potential respondents. Initial contact was made with Gayndah Packers through the Department of Agriculture, Fisheries and Forestry in October 2005. The Board of Directors agreed to participate in the research on behalf of the Cooperative. They also agreed to provide contact details for the researcher to potential participants. This study was conducted in conjunction with, but not on behalf of, Gayndah Packers.

Field research was conducted during two visits to Gayndah. The first was a preliminary visit in December 2005 to meet with the Quality Manager and other members of the Board of Directors. This visit enabled the researcher to gain an understanding of the standards environment in which Gayndah Packers producers were operating, the Cooperative structure and an overview of citrus production. Between the first and second visits, the Cooperative agreed to provide potential respondents with the contact details of the researcher. Potential respondents were advised to contact the researcher if they were interested in participating in the research. Semi-structured interviews were carried out with eighteen of the twenty-eight members of Gayndah Packers during a second visit in February 2006. In addition, informal, semi-structured interviews were conducted via telephone with other agencies including Growcom, Department of Agriculture, Fisheries and Forestry, and several third party certifying organisations. These formal and informal interviews produced a significant volume of data regarding the experiences of growers in certifying to private food quality standards. The research outcomes focus almost entirely on the findings of

interviews conducted with members of Gayndah Packers, although they are supported by data gathered from interviews with the key organisations previously listed.

Gayndah Packers provided Cooperative members with an overview of the research and the contact details for the researcher, and identified potential participants. Due to the nature of the certification process, for the Cooperative to be certified to ISO, Freshcare and GlobalGAP, all cooperative members must certify to the schemes. Accordingly, judgement on the suitability of respondents for participation in this research was based solely on their Cooperative membership. One or two semi-structured interviews were conducted with each respondent. A thematic guide provided a degree of structure to the interviews, and the researcher probed respondents to expand on arising issues and points. This approach was useful in allowing the researcher to clarify responses and follow up on an issue that may not have been anticipated in the methodological design (May, 2001). Interviews ranged in length from 20 minutes to 90 minutes. Most participants were interviewed individually, although several were interviewed in company of life or business partners. Participants nominated the location for the interviews, which were conducted at the Gayndah Packers packing shed, at the participant's houses, or their orchards. Participants had been provided with an overview of the subjects to be discussed prior to the interviews. At the commencement of interviews, participants were advised that their participation was voluntary and they could withdraw at time without penalty to themselves. Additionally, they were reminded that only those directly involved in the project knew their identity, and their responses would remain anonymous. Participant anonymity was an important part of the data collection phase, as participants were providing potentially sensitive data about their business practices. A digital Dictaphone was used to record interviews. Once transcribed, digital audio records of the interviews were deleted.

Interviews commenced with basic personal conversations and descriptive questions regarding the participant's business or family. Fine et al (2003) suggests that the establishment of rapport in interviews is of paramount importance, given that the interview process is designed to elicit an understanding of interviewees' perspectives. Feminist approaches also suggest that expecting a respondent to reveal important, personal

information without entering into a dialogue and becoming engaged is untenable (Oakley, 1990). Commencing interviews with 'comfortable' questions also served the purpose of allowing the interviewees to become accustomed to a recording device. From this point onwards, a range of secondary questions were asked of respondents. These often commenced in a uniform manner between interviews, but probing questions took the interviews off course at times, depending on the responses of interviewees.

In an effort to triangulate the data collected through this process, the researcher gathered information prior to conducting the field research about the impacts of compliance with private food standards in Australia from auditors and other industry bodies, although there is limited data on this subject. Additionally, several key informants within Gayndah Packers were identified and interviewed prior to other participants; these informants were Board members or managers within the Cooperative. Data was also collected from various observers external to Gayndah Packers on the certification process as undergone by the Cooperative (Table 4-2). This served the purpose of identifying key issues and themes surrounding private standards. Furthermore, participants were not asked leading questions and where possible, key words were not used in interviews until participants had used them. Fine et al (2004:187) suggest this adds one layer of data to another, "to build a confirmatory edifice".

Table 4-2: Interviews conducted

Cooperative members	18
Other Cooperative employees	3
Government agency staff	2
Industry organisation staff	2
Auditors	4
Total	29

The choice of a small group of producers had strengths and weaknesses. On the one hand, it allowed for a qualitative assessment of the impacts and ongoing implications associated with certification. It also allowed for exploration of the internal dynamics of the Cooperative that may have been affected as a result of certification, and may in turn have

consequences beyond that of just the Cooperative. However, focus on one group of closely connected producers may skew the diversity of results within the group. To mitigate this, the researcher conducted interviews with one respondent only at a time. However, there may remain some congruence between informants' responses.

The data collected were transcribed and manually coded. The coding process focussed on analysing transcripts to draw out categorical subject areas according to questions, as well as the constructs that were raised by respondents. Interviews were coded several times over as new ideas and subjects were raised. Microsoft Word was initially utilised for data management and this allowed the researcher the flexibility of manual coding. Transcripts were entered into N'Vivo and recoded prior to finalising Chapters Five and Six. N'Vivo allowed the researcher to take a more structured approach to coding and analysing the data, as well as the opportunity to examine relationships between subject areas.

4.7 Methodological Limitations

To interpret the findings of this research, several limitations must be considered. The use of interviews as a primary method of data collection introduces two key limitations. First, the richness of data gathered in interviews is dependant on the skills of the researcher. To minimise this limitation as much as possible, the interviewer prepared thoroughly and well in advance for interviews. Preliminary research was conducted with Gayndah Packers to gain an understanding of the business practices and processes, and the GlobalGAP and Freshcare standards. Additionally, the researcher gathered an overview of the impacts of certification with the Quality Manager and several external commentators prior to interviews. This information was beneficial for the researcher in preparing for interviews. Interviewees were not 'led' to answer within this framework. However, it assisted the researcher in preparing for the potential range of responses.

A second limitation of interviews as a data collection method is that data is collected about what participants say they do, rather than what they actually do. To avoid this, the

researcher endeavoured to ask questions more than once, rewording and rephrasing them. This can highlight areas where participants unintentionally provided incorrect information, although to some extent this is an unavoidable limitation associated with data collection through interviews (Devine and Heath, 1999). This is similarly related to a further limitation of this research; that the analysis presented is based on retrospective data. The focus of this research is on aspects of certification to GlobalGAP which occurred several years ago. Additionally, it considered aspects of certification to Freshcare, which occurred around four years ago. While this data is important for the interpretation of this research, it did not warrant the use of methods often employed for retrospective data collection, such as history calendars.

Where possible, data were triangulated through a process of layering information provided by many respondents, including members of Gayndah Packers, auditors and representatives of government agencies. Perhaps the most important limitation worth noting is the recruitment method of participants. According to ethical requirements, the researcher could not directly contact participants. Instead, Gayndah Packers provided the contact information for the researcher to potential respondents. This may have allowed preselection of 'desirable' participants by Gayndah Packers. However, through the course of this research, more than half of the cooperative members were interviewed and a broad range of views were recorded, suggesting it is unlikely that this occurred.

4.8 Summary

Throughout this study, methodology was considered an integral aspect of the research outcome. In addition to providing detail on the practicalities of the research, this chapter has reflected on the importance of methodology to the findings of this study, as well as outlining the methods applied in conducting this research, and their benefits and limitations. Importantly, this section has also considered the subjective role of the researcher as a part of the research outcome, unable to be removed from the process itself. It highlights the particular way in which the researcher was viewed and considers the

implications of this on the findings. The ensuing two chapters will move on from this discussion to outline the key findings of the research undertaken.

5 GlobalGAP certification

5.1 Introduction

As an exploratory study, this research sought to explore how producers are impacted by and are responding to GlobalGAP certification. The outcomes emerging from data analysis of the semi-structured interviews conducted in 2006 are outlined in this chapter. Direct quotations are utilised to help capture similar and unique viewpoints. This is the first of two chapters examining these findings, and outlines the impacts of GlobalGAP certification for individual producers and Gayndah Packers as a group. Though impacts varied extensively between producers, in-depth interviews revealed a number of implications and themes that were recurring between many respondents. This chapter presents details about the realities of certification to and production under GlobalGAP with a focus on the administrative and on-farm changes made as a result of certification.

5.2 Certification to GlobalGAP

Like many farmers, this group of citrus producers were facing decreasing profit margins, with prices continually driven down in a changing competitive environment. As noted in the previous chapter, the Australian citrus industry has had several recent setbacks, meaning many growers were "doing it pretty hard [due to] the import tariff in Indonesia and citrus canker [making] life difficult at the moment"[1]. Rather than this reducing the likelihood of the Cooperative engaging in further expensive initiatives such as GlobalGAP, this became a justification for pursuing GlobalGAP certification. It was reasoned that remaining competitive and at the forefront of market requirements could be a useful marketing tool for the organisation, even if there was

[1] Respondent viii

significant financial outlay and risk. Indeed, remaining competitive was cited as a reason for gaining GlobalGAP certification. As one Board member explained, "the citrus industry is going through hard times and you really have to be actively selling your product. So we need to be proactive. If we weren't in such hard times, we might not be going down that road"[2]. This sense of needing to keep up with market requirements was summed up by another respondent who said, "we did not have a choice... if we didn't certify to GlobalGAP we wouldn't be able to sell our fruit anywhere except for Australia. That was our main motivation for doing it"[3]. Another member suggested that the large quantity of fruit produced by Gayndah Packers meant the Cooperative was not as market mobile as other producers, and would be more likely to be required to meet the requirements of retailers, "We have a fairly large volume of fruit and we had to be able to get into as many markets as we can. And to get into those markets you just have to do it"[4]. Nonetheless, members of the Board said the decision to gain GlobalGAP certification was ultimately about pre-empting the future requirements of markets, with other countries and organisations likely to require similar standards into the future:

> The thing we always have in the back of our minds is that the world seems to be heading in that direction – especially when you hear about bird-flu and salmonella and BSE. And as growers, we have to fit in with that, and be ahead of it so that when it does come down to consumers not buying something because they don't know the conditions that it was produced in, we can know we are preferred suppliers because we have certified and done the right things[5].

Of the Cooperative members that were not privy to these rationalisations and were not involved in the decision making processes, some were less convinced about the need for GlobalGAP certified fruit, indicating that "we did not have much choice [due to the decision of the majority of Cooperative members]" [6]. However, for the most part, these growers believed that certification was the only choice for the Cooperative, due to competition in the citrus industry, as

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[2] Respondent ix
[3] Respondent iii
[4] Respondent vi
[5] Respondent vi
[6] Respondent iv

well as future requirements of retailers. Some respondents suggested that Gayndah Packers had already secured orders "because [they] had GlobalGAP certification[7]".

The decision to gain GlobalGAP certification was not made lightly because, "we knew about it and we knew it was probably going to be hard"[8]. Members of the Cooperative had heard about GlobalGAP from other growers and industry representatives, who had suggested that with almost 250 control points that address issues from Occupational Health and Safety (OH&S) to waste management and wildlife conservation, the standard was considerably more comprehensive than HACCP and Freshcare. Many respondents recalled "worrying" about gaining accreditation, or being "stressed out about it"[9], however, there turned out to be few changes required for producers. This was quite different to Freshcare certification. Most growers could not recall feeling stressed or worried about this previous certification, although it was several years prior to GlobalGAP certification so they may have been unable to accurately recall their concerns at the time. Most growers could not precisely recall the changes that were required for Freshcare, although there was an emphasis on traceability that required some administrative change. For example, respondents were required to develop a detailed spray diary to ensure harvesting occurred at appropriate intervals after spraying[10]. The Cooperative had required similar information from members prior to certification to Freshcare. However, a greater level of detail was required for Freshcare certification. Aside from this, informants could recall only that, "we had a lot more paperwork to do than we did previously"[11]. Respondents suggested there were few changes required in on-farm practices for certification to Freshcare.

Certification to GlobalGAP was quite different, and growers recalled the substantive administrative changes involved in certifying to the standard. For the most part, informants

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[7] Respondent iv, v, viii
[8] Respondent v
[9] Respondent xvi, iii, xvii
[10] Respondent v
[11] Respondent vi

said that the administrative requirements of GlobalGAP were "over the top"[12], and, "above and beyond what is reasonable"[13]. One grower estimated that certification to GlobalGAP meant a "virtual tripling"[14] of paperwork over that required by Freshcare. Two informants illustrate the extent to which GlobalGAP has changed the administrative requirements for producers:

- In GlobalGAP you have to name blocks and rows of trees. That has been a big thing, we have always named our blocks, but now we have to have rows labelled too. And down to the fine points of, if you knew someone was picking in Row 2, you wouldn't fly-bait that area, you would do a patch around it. But now you have to write down that this person is picking, so we fly-baited the other blocks. This all has to be documented – every little movement. We knew what bin numbers had been picked by who, and from what block. We had it all written down in a little book. And now, you even know the rows that fruit has been picked from.

- With the chemical inventories you have to record what you used, how much you used, where you used it, the active ingredient in it, the amount of the active ingredient, what days you used it, who you brought it from, how you washed the drums, where you washed the drums, how you disposed of the drums, paperwork from disposing the drums. Then you need paperwork to tell yourself where the paperwork is.[15]

This was detail that producers were aware of prior to GlobalGAP and in general, recording this data did not require any change in on-farm management practices. However, producers had not recorded data at this level previously. For example, growers had "in their head"[16] where pickers were or had been, and would not allow them to pick in areas that had recently been fly-baited. Hence, growers were faced with increasing administrative demands as required for GlobalGAP. As one grower noted, "I joke to people that I am not a farmer anymore, I am a clerk"[17], and while this respondent was joking, there were many comments

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[12] Respondent xiv
[13] Respondent ii
[14] Respondent xv
[15] Respondent xiv
[16] Respondent v
[17] Respondent ix

made by other growers to suggest that the administrative requirements of GlobalGAP had reduced their capacity to work instinctively. In this way, the role of orchardists had become different after certification to GlobalGAP.

The result of these prescriptive requirements was an increasing time demand on growers, and in many cases, their families. Some producers shared the increased administrative duties with spouses and other family members. In these cases, the wives or children of orchardists took on record keeping duties. For the most part, the additional paperwork was largely undertaken by the primary orchardist. GlobalGAP contributed anywhere from "a couple of hours"[18] to "half a day"[19] per week in additional workload. The extra work was incorporated into the working week of respondents. Nonetheless, one respondent observed:

> It takes time away from me, away from the orchard, away from the kids. That's time I could be spending elsewhere. At least I have the time to spare I suppose. What about the ones who don't?[20]

Rather than remove the focus from other areas of production, respondents indicated that it simply added to their working hours.

5.3 Certification support

Around half of those interviewed would not have pursued individual GlobalGAP certification if they were not members of Gayndah Packers. Respondents gave several explanations for this. Some respondents thought they "would not have seen the benefit in certifying to GlobalGAP"[21], believing they could "sell to the Australia retailers without

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[18] Respondent xiv
[19] Respondent iii
[20] Respondent iv
[21] Respondent v

worrying about all the other requirements."[22] These growers would not have investigated certification at all, and even as certified growers they were less likely to regard GlobalGAP as providing producers with significant benefits. Others suggested the cost of certification would have proven prohibitive for an individual producer, and "with no extra return for GlobalGAP citrus, why would I if I was a smaller grower? I could sell locally without having to spend the money".[23] Many of these respondents noted that for smaller, individual growers that did not produce large amounts of citrus, "the need to get GlobalGAP accreditation would not exist"[24]. Some respondents thought they would have investigated the certification process but probably would have found the requirements too demanding to continue with certification. Summarising the words of many, one respondent stated:

> [Certifying to GlobalGAP] is hard. Without the support of other growers, and a quality manager, I am not sure how growers out there by themselves would get on. We certainly would have read about it, and then thought, 'too hard'.[25]

In this regard, many were quick to suggest that without being part of a group undergoing GlobalGAP certification together, they would have had more difficulty in the certification process. There were other aspects of group certification that eased the certification process for growers. A key point raised by many respondents was that certification through Gayndah Packers provided growers with an informal support network. One grower summarised:

> Being part of Gayndah Packers makes it a lot easier for us. It takes a lot of the burden away from us. We have ongoing support from them and we get help whenever we need it. Growers support each other, and the quality manager helps us out a lot.[26]

Another respondent was more explicit on how growers "band together to get us all through"[27]:

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[22] Respondent x
[23] Respondent iii
[24] Respondent vi
[25] Respondent xii
[26] Respondent ix

> We are able to help each other. When one of us has trouble with something, they might thrash it out it with other orchardists that have had the same problem. That helps a bit. It makes you feel like you are not alone struggling with something. So we are supportive of each other. And the ones that are audited can see that the auditor is harder or looking for specific things, so they pass that information on, and give each other a hand.[28]

Many respondents suggested the support available from the Quality Manager at Gayndah Packers was a key factor in "getting through GlobalGAP"[29]. As noted above, the technical and administrative requirements for certification, as well as language and interpretation were sufficiently difficult for many producers. Assistance provided through the Quality Manager was not limited to certification specifics; producers could also access assistance for computer skills, records maintenance, farm management planning and Occupational Health and Safety (OH&S) issues. Respondents raised the support they were offered through this process repeatedly, making clear that attempts to gain certification would be less likely to be successful without this assistance. They stated, for example, that:

- The quality manager visited at my house to sit down at my computer and go through what is required. I did not understand what I had to do and what the reason for doing it all for was.[30]

- I had not done a conservation management plan, and we sat down in a group and did one. We all sat down and had a big talk about it. And then the Quality Manager came up with a plan for us.[31]

Respondents suggested that particular business management practices promoted by Gayndah Packers eased their transition from Freshcare to GlobalGAP. For example, Gayndah Packers supplied individual growers with quality metrics comparing their performance to the remainder of the Cooperative. These quality metrics had moved

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[27] Respondent v
[28] Respondent ii
[29] Respondent xii
[30] Respondent xvii
[31] Respondent v

growers towards implementing quality management systems and gaining an awareness of different process requirements. This, it was suggested, made the process more achievable. In the words of one respondent:

> I am absolutely sure that being part of Gayndah Packers has moved growers in the direction of thinking more carefully about how they manage their properties, environmentally, socially and economically. That made it easier for us to join GlobalGAP than it would have been otherwise.[32]

Another feature of the Cooperative structure that was seen as beneficial for aligning the production processes of members with that required by GlobalGAP was the separation of packing from on-farm production. Producers transport citrus to the Cooperative managed packing shed, where the responsibility for treatment, packing and further transportation is managed by other employees of Gayndah Packers. This removes the responsibility for the latter stages of production from growers. This led growers to observe:

- We don't have to pack the fruit... That takes a lot of the burden away from us, and makes it easier. If we had to think about that on top of the rest of it, we would have had a harder time of it. We were lucky that we are part of the group. If you were by yourself and you did your own packing as well.... Well, I hate to think... You would want a lot of support – support that is expensive. You'd have to look at whether you would get anything back for it. And if your bottom line didn't change you probably wouldn't go for it.[33]

- We don't have anything to do with packing and it's simpler that way for me. It would have been worse if I did that end of it too. It was already a hard time.[34]

For the most part, respondents did not comment about assistance they had received from organisations external to Gayndah Packers. For example, industry groups and the

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[32] Respondent viii
[33] Respondent ix
[34] Respondent v

Department of Agriculture, Fisheries and Forestry (DAFF) were not pointed to as providing resources to assist respondents in certification. Growers were not familiar with the DAFF report, 'Guidelines for Implementing GlobalGAP for Australian Fresh Fruit and Vegetable Producers (2004), although it may not have been available to growers during the Gayndah Packers GlobalGAP certification period. The only exception was support from the Queensland Department of Primary Industries on growers Land and Water Management Plans, outlined previously.

A couple of respondents suggested that group certification may have caused an 'information gap' by pushing producers through the certification process, hampering their understandings of the processes behind certification. In the words of one informant:

> You sort of go through with the group, and you are told what you have to do, and you read what you have to do. Then you hear other people talking about it and talk about it a bit too. But you don't pull it apart as much as you would if you were the only one, and you had to understand every little word.[35]

Others made comments to the effect of, "you read what you have to, then file the rest. If there was anything significant, you would know. That's where having a quality manager helps."[36]

5.4 Certification difficulties

Three members of Gayndah Packers left the Cooperative once the decision to certify to GlobalGAP was made. Respondents attributed GlobalGAP certification to the attrition of these members, who have remained in the citrus industry without GlobalGAP certification. It was assumed that these producers traded with smaller retail chains and independent stores that did not have the stringent certification requirements of larger retailing organisations: "The growers that have left are not worried about exports, they will sell on the

[35] Respondent xv
[36] Respondent xvi

domestic market only"[37]. For the remaining producers, "It puts more stress on us though, that they left. We have to lift our prices a little to cover the fact that they left"[38].

It was suggested by most respondents that, for the producers that left the Cooperative, the disincentive was not financial because the Cooperative shared the costs of certification between producers, reducing the burden for individual growers. There was some financial risk in GlobalGAP certification. However, this was not a concern for the vast majority of respondents and it was assumed not to be problematic for those that left the Cooperative. Instead, the technical and administrative requirements for certification acted as a deterrent to remaining in the Cooperative. One respondent recalled the response to the decision of Gayndah Packers to certify:

> Most of us were horrified when we heard that everyone wanted Gayndah Packers to certify to GlobalGAP. I mean, we had just been through Freshcare, which was okay, but we knew that GlobalGAP would be a big step up from Freshcare. I thought about getting out at the time.[39]

Respondents indicated they were aware of the potential benefits arising from certification: "We knew there could be some benefits – it is a great thing to be able to go back to the books and say, we sprayed in the first week of January, or whatever it may be"[40]; however, this was not significant because the benefits of doing so would not be utilised to their full capacity by most producers. For example, several informants made comments to the effect of, "We knew it could be good, but who has time to do extra bookwork to get a little bit of benefit?"[41] Nonetheless, one grower said that certifying to GlobalGAP had, "probably made us more aware of the overall amounts of chemicals we use... I guess because of all of the paperwork we have become more conscious of all this"[42]

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[37] Respondent viii
[38] Respondent viii
[39] Respondent vii
[40] Respondent vii
[41] Respondent xvi
[42] Respondent iv

Many respondents cited increased computerisation required by certification schemes as a disincentive for remaining in the industry. As one informant mentioned:

> My wife used to do that side of things – I've been in real trouble since she left. I can't use computers very well. I am learning. Since she left me, I have been forced to. But I don't like it and it takes up a lot of the time I could be spending on the property. I don't think I will be in this game much longer.[43]

It was mainly older respondents who voiced concerns about computerisation and suggested it may have led to attrition of Cooperative members. For example, several respondents said, "I'm too old to be learning the ropes on computers"[44]. Some of this group of respondents suggested that increasingly comprehensive production requirements could push them to retire earlier than they would have otherwise. It was the administrative requirements of certification like computerisation or extensive paper trails that were perceived as a burden for these respondents.

In the period since Gayndah Packers had certified to GlobalGAP, several orchardists had expressed interest in joining the Cooperative. These growers may have recognised the potential benefits of sharing the costs of certification between many growers, as well as having access to the support associated with being a member of the Cooperative. However, the Cooperative had not taken on any more members.

5.5 On-farm change

There were some changes required for most growers in certification to GlobalGAP, although these were more often than not technicalities regarding chemical storage, lighting and signage. For example, informants said that:

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[43] Respondent x
[44] Respondent xvi

- We had to change the way we store our chemicals so that there was no common airspace between our fertilisers and other chemicals.[45]

- I've changed the edges of the chemical storage facility on the property so it's got bunding around it.[46]

- I had to put covers over the lights in the greening room. And there are different requirements for on-farm signage, so I spent some money getting that all up to scratch too.[47]

With the support of the Quality Manager at Gayndah Packers, respondents were able to identify the changes that were required for certification to GlobalGAP, and made these changes prior to the initial audit. These changes were costly for some growers. In the words of one landholder, 'Mostly GlobalGAP hasn't been hard to implement, it has just been very costly"[48]. Another grower indicated that certification to GlobalGAP would have been easier to justify "if we got more money for our product"[49].

Aside from the changes that were required to be made to chemical storage, lighting, signage and the additional administrative requirements, GlobalGAP certification did not bring about any change in on-farm management practices. This point was highlighted by the following two observations:

- I have never gone back to the GlobalGAP documentation to check anything that I know is covered in the guidelines. The only reason I look at the guidelines is to check that I am reporting the data they want and therefore that I comply to what they are after. I don't use either of them to help me in what I do, or to tell me what I should be doing.[50]

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[45] Respondent v
[46] Respondent xiii
[47] Respondent xi
[48] Respondent iii
[49] Respondent iv
[50] Respondent xv

- I don't read the on-farm procedures to make sure I am doing things the way GlobalGAP want. I already am, I think. The only time I pick up any documentation is to check the paperwork I need to do.[51]

Hence, for the most part, certification to GlobalGAP meant that "the management isn't that different at all, it's just a step further in the paperwork"[52]. While one grower suggested that this was a result of "GlobalGAP covering things that were pretty much just common sense"[53], it was also possibly the result of incremental changes that have occurred over a number of years aligning production processes with those required by GlobalGAP. In the late 1990s, the Cooperative gained certification to ISO 9000, which promoted end to end quality management throughout Gayndah Packers. Recognising the value of quality and performance management, the Cooperative then developed an in-house quality management system. The goals were to promote information sharing between producers, and allow individual producers to benchmark against each other. This system familiarised individual producers with quality management strategies and metrics and promoted a drive for high quality, traceable fruit. Thus, when it came time to certify to Freshcare, and subsequently GlobalGAP, few changes were required in day-to-day farm management. For some growers, these changes were below the standard they liked to maintain themselves. For example, one grower said that when it came to the onerous administrative requirements, "I already had records for fertiliser and my spray records were kept too. I still have them from years back. They help me to keep track of what is happening."[54] In this case, the producer had maintained his own standard of traceability. While this was not the norm within the Cooperative, it is indicative of a raised awareness of and comfort with some of the requirements that might be included within global certification schemes.

Nonetheless, the lack of change required by most led some respondents to question the benefits of gaining GlobalGAP certification. Many respondents said that "it looked very lucrative when

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[51] Respondent iv
[52] Respondent viii
[53] Respondent iv
[54] Respondent xv

we started"[55]. Yet, in reality "the amount of fruit we are selling and the money we are getting is hardly worth the effort[56]. This caused growers to be concerned that GlobalGAP had "cost a lot of money"[57] but was "not getting [them] anywhere"[58]. The costs were largely associated with maintaining annual inspections, regardless of whether the certification was required. For example, several growers referred to an earlier year when their produce had been damaged by hail, meaning the fruit could not be exported at all for an entire season, yet the certification to GlobalGAP was maintained: "we still had to go through the certification and pay for it all"[59]. The Board had previously discussed whether ongoing certification was worth the additional expense but had decided that due to the increasing "market demand for certified produce and the fact that we have all the requirements for certification"[60] they would continue with certification. Thus, in the words of one respondent, "I hope there are benefits for us down the track. At this stage, we are just doing paperwork for a pedantic mob, and we aren't seeing any real benefit from it"[61].

Producers maintained certification because, "the requirements of buyers are far higher than they ever have been. Food safety and quality is being forced onto the consumer more and more as you see issues like foot and mouth and bird flu"[62]. While many suggested consumers should be prepared to pay "a little bit more to know that it is safe and good"[63], most believed this as unlikely. Further:

> Domestically the two main [retailing] chains are controlling the market, which is a problem for horticulturalists because the margins are becoming much slimmer. They only want to pay the minimum cost of production and that's it. They have a price they want to pay in the peak of the season, and that hasn't changed for a number of years, but

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55 Respondent viii
56 Respondent viii, iii, v, i
57 Respondent vi
58 Respondent vi
59 Respondent xvii
60 Respondent x
61 Respondent xvii
62 Respondent vi
63 Respondent vi

it's becoming more expensive to comply; labour is more expensive, fuel and the rest of it[64].

This increasing price-squeeze meant that, "to produce fruit how the consumer wants it costs me more money, and if they won't pay for it then I am going out the back door"[65]. Some landholders had reduced costs by mechanising parts of their production process[66]. However, as a couple of smaller growers pointed out, mechanising parts of the production process was only realistic for large producers. This had left a couple of respondents wondering whether there was a future on their farms: "The sad part is that you start to wonder whether you are doing the right thing for the kids. You wonder whether you should send them off to university, and not leave the orchards to them, because it is getting very difficult with all the requirements."[67]

5.6 Government requirements

As previously noted, the decision to certify to GlobalGAP created concern throughout the Cooperative due to vastly different requirements to those of Freshcare. However, many of the requirements for environmental protection, and occupational health, safety and welfare, which are required for certification to GlobalGAP mirrored the requirements of the Queensland State Government. Where there was overlap between the requirements of GlobalGAP and the requirements of State Government, GlobalGAP control points had limited significance on the day-to-day farm management processes of respondents. A key example lay in water management. Previously, in Queensland, water extraction licences were tied to the land on which the water was used. Under the Queensland Water Act 2000, properties are granted an allocation of water that can be traded separately from land title. The aim of separating land and water allocations was to promote greater efficiency in the

[64] Respondent vi
[65] Respondent vi
[66] Respondent xviii
[67] Respondent iv

use of irrigated water by enabling users to sell surpluses or increase production. The transfer of water entitlements requires buyers and lessees of water allocations to develop a Land and Water Management Plan (L&WMP), which must be approved by the Department of Natural Resources and Mines prior to trading. The L&WMP consists of a property map, overlays that show all information relevant to the L&WMP, such as land use and property borders, and a written report that outlines how producers meet the desired outcomes. The State Government has encouraged all producers to develop a L&WMP by providing free courses for those who wish to do so. In addition to government support, members of the Cooperative were able to access additional support through Gayndah Packers, which provided a trained officer to assist growers in developing their plans. As a result, growers within the Cooperative had L&WMPs in place prior to certification to GlobalGAP, including those who were unlikely to need one under State legislation in the short-term. Producers suggested that the training provided was a key incentive to complete a plan, as was the potential of future water shortages that may require the purchase of additional water. In the words of one grower:

> We don't need a L&WMP but we did one anyway, just in case. We signed up for a course that was held here in Gayndah, and the reason we did it was because we thought that if we were one of the first to go through it that it would be a little bit easier. Otherwise we would have to have done a course in Brisbane or somewhere else and we might not have had the support of the Government. I am sure they would have been stricter on us too. Its also easier when there are a group of people with you who you know, and you can all help each other.[68]

There was similar overlap between Government requirements on Worker Health, Safety and Welfare. The Duties of Care covered by Federal and Queensland OH&S laws include the duty to ensure employee safety in the work environment; the duty to provide training and supervision to adequately protect employees from injuries and health risks; and the duty to provide adequate facilities for employees. GlobalGAP has very similar requirements. This meant that, again, producers had previously met the standards set out in GlobalGAP

[68] Respondent xii

through meeting the requirements of Government. Nonetheless, respondents were required to provide paperwork to prove these requirements had been met, further adding to frustrations about the onerous administrative requirements of GlobalGAP. In the words of one grower, "it's the same things in a different format... we have to fill out forms for OH&S in three different formats, all with the same information but for different groups. It's a waste of time when I could be out in my orchard"[69]. Another respondent said, "I find it a bit annoying that they even cover worker health and safety. It is covered in Australia by our laws anyway"[70].

While informants tended to be negative about GlobalGAP on the basis that it duplicated the requirements of other organisations, many suggested that if the major Australian retail chains would accept GlobalGAP they would discontinue Freshcare certification and certify to GlobalGAP only. One of the Board members said:

> If we can get Woolworths to agree to GlobalGAP rather than Freshcare, that would make our lives much easier. They do the audits at the same time, but they aren't always in the same place. Sometimes they do them both on one. If Woolworths recognises GlobalGAP rather than Freshcare we will drop Freshcare straight away. What we need is a universal system – even if it is GlobalGAP.[71]

Thus, while much of the frustration expressed by producers was about the tediousness of the GlobalGAP requirements, the standard would have been adopted over and above other certification schemes.

5.7 Certification problems

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[69] Respondent xv
[70] Respondent viii
[71] Respondent viii

In spite of this, the administrative aspects of GlobalGAP were one of the problematic topics for respondents. For example, many growers bemoaned the wording of the GlobalGAP standard, suggesting it is convoluted and difficult to understand:

- GlobalGAP can be very hard. Even the questions are hard. They ask you the same thing four or five times, but worded differently.[72]

- Some of the questions are really beyond us. We don't even know some of the words in the questions, let alone what the question is asking. We have to get the dictionary out to read the paperwork.[73]

As well as difficulty in understanding the wording of some parts of GlobalGAP, some respondents suggested that interpreting the requirements was, at times, "difficult"[74] and "too time consuming"[75]:

> The questions can be convoluted, and sometimes downright confusing. I have been doing this for years and I am not sure what they are talking about sometimes.[76]

For some respondents this acted as a limitation that "stops you doing any more than you have to"[77], such as completing the recommended control points. However, respondents indicated that if they were uncertain about their interpretation of a control point, they would consult with the Gayndah Packers quality control manager. If the quality control manager was unable to answer the query, the matter would be referred to the auditing agency.

This was also raised by auditors, who expressed concerns about the potential for the use of technical language to disadvantage or cause stress for producers in the certification process,

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[72] Respondent xiii
[73] Respondent iii
[74] Respondent ix
[75] Respondent viii
[76] Respondent xv
[77] Respondent i

noting: "Parts of the [GlobalGAP] horticulture standard are worded in extremely technical language". Further complicating the matter, one auditor suggested there could be difficulties in ensuring uniform interpretation of GlobalGAP and other standards between auditors saying, "Different people's interpretations of standards are naturally going to vary. The Quality Assurance Manager might have one idea of what a requirement is, then an auditor will have another idea and another auditor will have another idea again." Respondents also expressed concerns that, "a lot of it comes down to the interpretation of the auditor, and that can make it difficult"[78]. One of the mechanisms for ensuring Cooperative members were not disadvantaged as a result of inconsistent interpretations of GlobalGAP, and indeed Freshcare and ISO9000, was to utilise the same auditors for each audit, and refer any queries about certification requirements back to the same auditor.

5.8 Supply chain dependencies

Many producers raised concerns about the prospect of GlobalGAP increasing producers' reliance on other supply chain actors, bringing with it significant risks for those needed to maintain certification. A key example raised by several respondents was the need for end-to-end paperwork showing the traceability of inputs. One informant cited a particular control point (Table 5-1) that requires a guarantee of traceability and certification of the seed or rootstock quality. This assumed that adjacent industries have similar practices in place to those required by GlobalGAP. Failure to provide this detail was a minor non-compliance point for producers. This necessitated reliance on other supply chain actors, even if these actors themselves were not GlobalGAP certified. In this case, the grower in question requested health certification for the propagation material from the vendor, who was unable to provide this information. The informant illustrated the difficulty this caused for him:

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[78] Respondent iv

> I asked for health certification for propagation material from the vendor, and the vendor laughed. I said I needed it for my paperwork. I was concerned that a minor non-compliance would be recorded for not being able to provide the required details. Imagine if I had have failed for that! I recorded the information – that I had asked for it, and the date and so on. I'm not sure if I would fail for that alone?[79]

Although citrus production does not frequently require seed or rootstock, the example highlights the difficulty producers may have in dealing with other supply chain actors who are not familiar with or not required to certify to GlobalGAP. This may force the development of new supply strategies and relations with other actors in the supply network.

Table 5-1: GlobalGAP control points and compliance criteria (propagation material) (Source: Eurep, 2007d)

PM . 3 . 2 Quality and Health			
PM. 3.2.1	Is there a document that guarantees seed quality (free from injurious pests, diseases, virus, etc.)?	A record/certificate of the seed quality, variety purity, variety name, Material Safety Data Sheet, batch number and seed supplier is available.	Recommended
PM. 3.2.2	Is all seed traceable to the supplier and batch number?	Records should be maintained of the seed supplier, batch lot number identification to prove traceability. No N/A	Major Must
PM. 3.2.3	Is purchased vegetative propagation material accompanied by officially recognised plant health certification?	There are records to show that propagation material is complying with national legislation or in its absence, sector organisation guidelines and fit for purpose, i.e. plant health certificate, terms of deliverance, signed letters or supplied by a nursery that has GlobalGAP (EUREPGAP) or GlobalGAP (EUREPGAP) recognised certification. Sales between sites must also be covered.	Minor Must

Perhaps the most pertinent example in this regard however, and one that was raised by many respondents was the reliance producers had on their employees to observe and work in accordance with the GlobalGAP standard. Like many horticultural industries, citrus has traditionally relied on seasonal workers to complete much of the orchard work, including thinning, pruning, picking and packing. While much of the treatment and packing work is

[79] Respondent x

managed by the Cooperative owned packing shed, the remainder of the work is the responsibility of individual growers. Growers suggested that they had difficulty in ensuring seasonal workers, who may only be on the property for a short period of time, followed the GlobalGAP guidelines, in spite of lengthy induction processes. One grower summarised the views of many:

> Even if we have someone there for a week we need to make sure that we go through all the procedures with them. It's very hard when we rely on people who may only be there for a short time. There is only myself and my other three workers and they need to make sure that everyone does the correct thing. And it's hard because workers, they don't comprehend, they don't understand why we have to do this. They sign and nod their heads.[80]

Another suggested, "it's hard to get the workers to understand the things that we have to do"[81]. This was particularly problematic when it came to maintaining accurate records for the traceability requirements of GlobalGAP, "It can be hard to get workers to fill out the forms properly from which rows they pick from"[82]. One producer summarised widespread concerns:

> I have to get workers who can speak English fluently and are literate to understand all this GlobalGAP stuff. They must be able to understand what we are saying and what they have to do, especially if the audits are going to go on during picking season. I also worry that if they can't interpret the induction checklists and instructions and there is an accident, that the producer is responsible for not making certain they could understand it all.[83]

Frustrations, however, were not limited to the technical aspects of picking. Illustrating the difficult situation this sometimes creates for growers, one lamented:

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[80] Respondent v
[81] Respondent i
[82] Respondent xv
[83] Respondent xiv

> We provide a toilet but we can't make the men use it. We tell them they have to but we can't watch every worker for the whole time they are here. If they don't use it, that is a minor compliance point for us.[84]

This was one of several issues relating to hygiene raised by producers. Others included ensuring seasonal workers washed their hands, and did not touch animals prior to picking. For most respondents, these problems had forced them to consider more carefully the workers they employed, "We try to get the same people year after year"[85] and "We mainly pick middle-aged couples. They tend to be the most reliable, and they seem to take what we say about how important things like washing hands and that are for us, more seriously than the younger workers do"[86]. Informants indicated that the burden of relying on seasonal workers for GlobalGAP compliance was emphasised in particular during picking season, when, as one respondent observed "we just hope the auditors don't come then, we don't want them to visit the pickers"[87]. This respondent went on to say "it's not that they do the wrong thing, it's that the requirements are beyond reasonable and realistic"[88]. One grower summarised these concerns:

> I wouldn't like to have pickers here when an auditor came around. It would make me nervous for an auditor to talk to anyone in the orchard because you would not want them to put a foot wrong. When it comes to pickers, they have to have washed their hands, they can't have clothes hanging over the bins, and they can't smoke in the orchard. It's all there in GlobalGAP, but you can't police them all the time. We can't make the men use toilets. We can ask, but that's it. So you really rely on those people to do a good job. Otherwise your certification and the certification of the entire group is in jeopardy.[89]

In the past, some respondents had been audited during the picking season. One respondent described the experience:

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[84] Respondent iii
[85] Respondent xii
[86] Respondent xi
[87] Respondent viii
[88] Respondent viii
[89] Respondent xviii

> One of the pickers had a jumper over hanging over the edge of one of the crates, so of course that was a minor compliance point, because he might have patted a dog on the way in. It was hard to get the workers to understand the things that we have to do.[90]

This was a minor non-compliance point for the respondent, who did successfully pass the audit. However, these examples highlight that while GlobalGAP is focussed on ensuring the safety and quality of food production, there may be implications for potentially many other supply chain actors.

5.9 Group certification

If GlobalGAP certification has forced the reliance of producers to some extent on external supply chain actors, it has equally increased reliance of growers on other growers within the Cooperative. The Group Certification option of GlobalGAP requires growers to depend on one another to pass the external auditing procedure (Appendix B). For the Cooperative to successfully pass annual GlobalGAP audits, a sample of six, randomly selected growers were audited. Each of those selected must pass the audit for certification to be granted. If a single grower fails, the entire Cooperative is audited, and continued certification is dependent on the exclusion of growers that have failed. There is a significant burden on the growers that are initially selected for audit, with respondents understanding that "what happens to the other growers is on your head if you are one of the ones audited"[91]. This was "a real worry"[92] for many growers, who voiced concerns about causing compliance issues for other growers. For example, one grower suggested:

> [External auditing] is a stressful process because you know that you rely on everyone else to do it right, and they rely on you. That is a lot of pressure for the ones that are audited. Growers are starting to come down on each other. I think there would be a serious

[90] Respondent i
[91] Respondent v
[92] Respondent xiii

> problem for anyone who caused the group to fail. It makes you think, is it worth it? Why do they make it so reliant on each other?[93]

Although most respondents suggested that Cooperative members were "pretty supportive of each other"[94], several made comments to the effect of "I would not like to be the one responsible for a fail"[95], and "I don't think they would be shouted too many beers at the pub at the end of the day."[96] Such sentiments are consistent with remarks made by a GlobalGAP auditor that "audits are very stressful for farmers"[97], as well as observations by the Quality Control manager, who, in referring to a particular external audit on a Cooperative member said:

> I thought he was going to have a heart attack. He was running from one end of the place to the other, trying to find this and that. His face was bright red and he was breathing hard. That's not good for an old fella.[98]

While all respondents successfully completed both the internal and external auditing, the following comment highlights how stressful the process can be;

> We know we have it all, but when someone is hammering you questions and that it can be hard to explain things, or even to find things that you need to get your hands on. And you are nervous before the thing starts – and even more with someone looking over your shoulder all the time[99]

A couple of respondents said they would "never" become accustomed to relying on others, because the idea of doing so was foreign for many farmers, "Farmers aren't farmers so they can rely on others, its an independent type of life you have so you don't have to rely too much on

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[93] Respondent v
[94] Respondent x
[95] Respondent v
[96] Respondent v
[97] Respondent x
[98] Respondent x
[99] Respondent xvii

others"[100]. Nonetheless, one respondent suggested, "it will just take a few years to get used to it"[101].

Interestingly, the one respondent reflected that, "since GlobalGAP has come about, everyone is starting to pull together a lot more and make sure that everything is done properly."[102] Others made similar comments regarding the extent to which growers rely on one another through group certification schemes, such as "we had to clean up our acts a bit because everyone else relies on each other"[103]

5.10 Summary

As a relatively large producer group that has certified to other quality standards prior to GlobalGAP, the range of findings described above indicate that GlobalGAP is likely to bring about at least some change for producers seeking to gain certification. There is anecdotal evidence to suggest that for a small number of producers, the changes were enough to warrant leaving the Cooperative to operate individually. That larger producers with a comparatively high level of support found the administrative aspects of certification complicated highlights the potential difficulties of smaller, non- affiliated producers, and those based in the developing world. It also suggests that among this group, attrition rates are likely to be much higher than those evidenced in this study. The difficulties highlighted by producers such as language barriers, reliance on in-house technical assistance, and interpretation of standards are potential starting points for government and industry support schemes. Nonetheless, several points raised also indicated that while many requirements are considered to be onerous, these requirements are at times duplicated requirements of other organisations.

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[100] Respondent iv
[101] Respondent ix
[102] Respondent ii
[103] Respondent xv

6 Governance under GlobalGAP

6.1 Introduction

Private standards including GlobalGAP are often presented as evidence for a shift to private governance controlled largely by the retailing sector within the agri-food system. Within this literature they are promulgated as an entity though which, when coupled with third party certification, retailing organisations are able to coordinate and control downstream actors, to achieve retailers' goals. While the previous chapter outlined the realities of production under GlobalGAP, this chapter focuses on power relations between retailers and respondents since certification to GlobalGAP, as well as issues of legitimacy surrounding Eurep and, indeed the GlobalGAP standard. Within this context, the final section of this chapter addresses the ability of GlobalGAP to meet the goal of promoting environmentally and socially responsible agriculture.

6.2 Legitimacy

The vast majority of informants questioned the legitimacy of Eurep and GlobalGAP. Concerns raised were related to the cultural specificity of a global standard for Australian producers; the relevance of an industry-wide standard that covered all cropping industries; the duplication of requirements of other organisations; and lack of comprehensiveness of GlobalGAP. Each of these will be dealt with below.

6.2.1 European standards in Australia

Though the cultural specificity of the GlobalGAP standard is comparatively not as far removed from the Australian 'farmscape' (Campbell, 2005) as other regions, the European development of a standard that is a virtual requirement for access to the European market,

in spite of the production location, was questioned by some informants. Some respondents reinforced their belief that GlobalGAP was inappropriate because the implementation of such a standard, to provide real benefits, would require flexibility and awareness of the particularities of the Australian horticultural industry, criticising GlobalGAP for being "irrelevant"[104] for the Australian horticultural industry.

- You would understand if it was the local Landcare group, the Queensland Government or even the community. You would say ok. But what do a bunch of retailers know about developing a conservation plan for the Australian environment? Very little, I'd say.[105]

- How many orchardists – or any other farmers – from outside Europe contributed to developing GlobalGAP? Not many, I don't think. So what do they know about farming in Australia? I can tell you now, it's a long way removed from farming in Europe.[106]

Many questioned the applicability of a standard "aimed at every country in the world, across the entire range of fruit and vegetable producers"[107], arguing that, "a lot of it is irrelevant for us"[108]. This touches on a key issue in attempting to develop standards that are globally relevant. In particular, many respondents suggested that some control points were more applicable for producers in other parts of the world:

- We are in Australia, not some country with no environmental laws or protection for workers. There are laws for everything we do here already so I don't know why we should have to conform to GlobalGAP.[109]

- Some of the things are very petty that are required by GlobalGAP. Things like having water on the trailer for pickers to wash their hands if they have had a smoke or something – you just cannot comprehend the need for that. It's not like some of these other countries where the workers are probably being whipped![110]

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[104] Respondent iii
[105] Respondent xviii
[106] Respondent vi
[107] Respondent xi
[108] Respondent x
[109] Respondent iii
[110] Respondent viii

Others found it "strange" that GlobalGAP could set production standards because "we have chemicals that we are allowed to use in Australia that we are not allowed to use on the trees that grow fruit for export to Europe and it's not even on the fruit – it's on the trees."[111] While a few respondents conceded, "GlobalGAP is a standard set of requirements that is supposed to be adopted around the world, so I guess that's why there is so much covered that isn't relevant to us"[112], there were a great many who suggested, "we are being treated like idiots"[113]. Consequently, it was argued that, "it would be more relevant for local groups or local organisations to work out what is relevant"[114], or that a standard integrated with Australian State and Federal laws would be, "more relevant for Australian growers."[115] Many suggested that this led to a lack of support for GlobalGAP among producers.

In spite of this, the vast majority of respondents suggested there was a need for the development of standards that addressed food safety, and growers tended to be supportive of this aspect of GlobalGAP. Commonly, the importance of consumers knowing and being reassured that their food was not "going to make [them] sick"[116] was highlighted. Respondents tended to be more positive about Freshcare, with some suggesting that, while they would prefer to operate without standards at all, Freshcare was "more relevant to the way things are done in Australia"[117]. One grower lamented, "you can understand why Freshcare is important. It was simpler than GlobalGAP, and focussed on traceability and chemicals. You can see why that is needed"[118]. These perspectives imply that producers would rather work without standards yet, in many cases, respondents advocated the need

[111] Respondent viii
[112] Respondent x
[113] Respondent iv
[114] Respondent x
[115] Respondent x
[116] Respondent vi
[117] Respondent viii
[118] Respondent iv

for food safety assurances through comments such as, "everyone has the right to know that what they eat is safe"[119].

6.2.2 Standardised standards

In addition to concerns about the ability of European developed food standards to cover issues relevant for Australian producers, there were concerns about the development of standards that covered entire cropping industries. Producers repeatedly questioned, "how much knowledge [can] the people that developed GlobalGAP have of citrus production"[120], highlighting that parts of the standard that deal with hygiene, and storage and transport facilities, are largely extraneous for citrus producers. They argued that post-farm gate citrus undergoes a series of treatments to ensure the fruit is clean and free of chemicals. In addition, unlike many other fruits, the skin is discarded. Several respondents illustrate this point:

- In our industry all the fruit is scrubbed, washed, dipped, blown and then peeled. So the relevance of the employees washing their hands after they have a smoke or go to the toilet is ridiculous. If you were picking strawberries or lettuce then it might be relevant. But we still have regulations on how the fruit has to be treated after it has been picked.[121]

- As compliance issues, things like whether a bird flies into the storage room seem ridiculous, to be honest. What do these people think happens in the orchard – the birds fly upside down, because they don't want to make a mess on the fruit? It really is absurd.[122]

- Having a cigarette down the paddock isn't a serious issue because we aren't eating the skin. It's probably relevant for grapes and peaches but it doesn't make sense to worry about that for us.[123]

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[119] Respondent v
[120] Respondent iii
[121] Respondent ix
[122] Respondent ii
[123] Respondent iv

Other informants drew attention to the relevance of inclusion of rootstock management requirements within the GlobalGAP standard for citrus growers[124]. With a production lifespan of almost twenty years, growers rarely purchased rootstock. As one informant explained, "Citrus is in the ground for 20 years or more so it is not applicable for us"[125]. In this context, informants tended to question the benefit in "writing a single document to cover every horticultural group"[126], suggesting that retailers "could have included detailed requirements, requirements that managed the so-called bad production techniques, if it were tailored for citrus producers specifically"[127]. One informant summarised the views of many, "there isn't much benefit ticking off things that have no relevance to us... I would be more likely to be positive about it, and I think some others would have been too, if it was a standard developed for the citrus industry."[128]

One respondent went further again to suggest that the nature of farming alone meant that developing 'standards' was flawed:

> I think the people that are doing the auditing are looking for one standard to cover the whole range but farming is dynamic and you can't say that what should be done on my land should be done on the next persons' land. They might have different soils, they might not manage riparian areas, they might have habitat for an endangered species at their place and all those things change what is the 'best' management for that bit of land.[129]

For this producer, process standards in agriculture were problematic. Yet production standards such as EMS or ISO9000, which identify issues and promote continuous improvement on an individual basis, may be less problematic.

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[124] Respondents x, xiii, v
[125] Respondent x
[126] Respondent iii
[127] Respondent iii
[128] Respondent xvi
[129] Respondent vi

6.2.3 Duplication of requirements

Respondents suggested that duplication between GlobalGAP and the requirements of other agencies and standards also led to a decline in support for the standard amongst Cooperative members. 'Worker Heath, Safety and Welfare' requirements were raised by many respondents in questioning the legitimacy of GlobalGAP, where it was suggested that the requirements led to a "doubling up in areas that the government already addresses"[130], making "more work for growers"[131]. This is turn had led to growers becoming "pretty unsupportive and annoyed with the whole thing"[132]. As one grower lamented:

> I don't see the relevance of most of the conformance points for what we do here. It's not up to GlobalGAP to talk to us about how we treat our employees. That is not relevant to producing a piece of fruit. I think everyone has the right to know that they are not getting chemicals or antibiotics or any other foreign bodies – that part is fine. What I have an issue with is all the other shit that is in there. Everything is already covered by Australian laws. Why do we need to worry about what someone in Europe says. It is a waste of my time.[133]

There was also a crossover between the requirements of GlobalGAP and Freshcare. For example, one respondent suggested that with the exception of "the ridiculous amount of paperwork that keeps growers out of the orchards"[134], there is little difference between GlobalGAP and Freshcare. GlobalGAP had not led to any changed practices, other than increased administrative duties. In particular, growers noted that traceability, chemical use, water use and worker health and safety were areas where GlobalGAP and Freshcare had similar requirements, with the same information required in different formats. This created substantial additional work for growers which, it was suggested, was nothing more than a "waste of time"[135]. Thus, for many growers, GlobalGAP was synonymous with time consuming paperwork and

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[130] Respondent vi
[131] Respondent vi
[132] Respondent iii
[133] Respondent iii
[134] Respondent iii
[135] Respondent ix

administrative requirements. One respondent explained, "We spend more time worrying about it than we do keeping track of all the paperwork."[136] This also led to growers questioning the applicability of GlobalGAP. For example, comments such as, "It's difficult to see the relevance when a lot of the GlobalGAP stuff is covered in Freshcare, or needed by the DPI or NRM, or for Gayndah Packers"[137]. Overlap between requirements of the different organisations also led to some confusion amongst informants, who suggested that, "it's hard to remember who needs what and what needs who"[138]. Respondents suggested they would welcome an integrated farm management system "with open arms"[139]. As previously noted, some producers would have been happy to certify to GlobalGAP, in spite of their lack of support for the standard, if it meant certifying to a single standard only.

6.2.4 Lack of detail

While the vast majority of producers were concerned about the duplication of requirements between organisations, a handful felt that the requirements of GlobalGAP were not comprehensive enough. For example, these respondents suggested that the additional data they collected was used to derive further efficiencies. As one informant reflected:

> A big issue for me in record-keeping of chemical use and de-greening is that what is required is not enough information for what I require, so in some instances I am keeping more information than is needed. I have tried to build it all into one system so that it is a bit simpler and less time consuming. Its hard though, and it would be better if it was the same format so you could take out what was required. At the moment a lot of my data is double or sometimes triple handled.[140]

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[136] Respondent iii
[137] Respondent xvi
[138] Respondent v
[139] Respondent vii
[140] Respondent vi

While some respondents suggested these aspects of the standard were beneficial for providing "something to fall back on, to prove that we are doing the right things"[141], other gains included the potential for greater efficiencies in business management. For example, one grower suggested that, since increasing the extent of traceability to that required by GlobalGAP, it was possible to derive a rudimentary return on investment analysis for individual workers. This allowed for greater selectivity when employing workers and may eventually bring about increased profitability through the selection of the most productive employees. Another often-cited example was the extensive chemical, fertiliser and water use records required for GlobalGAP and Freshcare certification, which allowed growers to closely monitor usage, as well as make time and geographical comparisons. Additionally, they may aid in predicting future water, fertiliser and chemical requirements. Several auditors validated these observations. For example, one auditor suggested that management benefits could offset additional expenses of certification: "if [producers] thoroughly assess the data collected for GlobalGAP auditors, in some cases there would be potential to recoup the certification expenses through other means". However this was not a widely expressed view, and as noted above, some respondents indicated that they would not have the time to spend additional hours on what they saw as further non-compulsory administrative requirements.

The sum of the questions surrounding the legitimacy of GlobalGAP was that the inclusion of seemingly irrelevant criteria made it difficult for some producers to justify the decision to certify to the standards, and this resulted in GlobalGAP receiving less support than other standards. This led some growers to do 'the bare minimum' of what is required in the standard by ignoring the recommended control points. As one grower explained, "I suppose I do the bare minimum of what I should in GlobalGAP because I don't support much of it. It's not terribly relevant."[142] Another grower suggested, "some of them treat it as a big joke – as ticking the boxes, but they have to do it. GlobalGAP can be a bit like jumping

[141] Respondent iii
[142] Respondent v

through hoops when a lot of them really don't see the point of it"[143]. This is likely to have implications on, for example, the likelihood of GlobalGAP being successful in promoting some of the goals it seeks to promote such as improved environmental management.

6.3 Loss of autonomy

Landholders expressed concerns about what GlobalGAP inferred for producers in the context of loss of autonomy in making decisions about their land, their businesses and their production practices. For example, one respondent questioned:

> Whose business is it how we manage our water, except for the person buying the water? The only relevance to what we do is the chemical aspects of it – to citrus. I can't see the relevance of any of the other aspects – hygiene, water management – that's no one else's business except ours.[144]

While some producers had made business decisions on the basis of GlobalGAP requirements of recommendations, others were quite clear that they had made their decisions based on "the industry moving in that direction"[145], "the recommendation of experts who know about it"[146], or "common sense good management practices" [147], rather than "because a standard said we should do it[148]". One landholder used the following example to illustrate:

> You always make sure you have grass in between the rows. It is a good, effective erosion control but there are also benefits of having particular grasses growing in the orchard because there are predatory mites growing in the grass and other insects that are beneficial. It has a positive value in your operation. And you do it because they are the

[143] Respondent x
[144] Respondent iii
[145] Respondent iv
[146] Respondent iv
[147] Respondent vi
[148] Respondent iv

right thing to do for the environment, and your operation is a part of the environment, not because GlobalGAP says you should do it.[149]

Several landholders suggested that they "resented the idea that they can tell me what to do"[150], or tended to "question the relevance of proving to Mr Smith in Europe that I manage my property in the way that he says."[151] Nonetheless, landholders ensured that they did "what we have to, so as to tick the right boxes"[152], although as previously noted, respondents quite often did little more than what was required by GlobalGAP, ignoring the non-mandatory points as a means of resisting GlobalGAP requirements.

6.4 Retailer power

Many respondents commented on the shift of responsibility for food safety and quality from retailers to producers, arguing that:

- Standards are the easiest way for retailers to get what they want without responsibility.[153]
- GlobalGAP removes the responsibility from the buyers, at no cost to them.[154]
- The responsibility is being put back on the farmer instead of the supermarkets being responsible for their own produce.[155]
- The retailing sector are putting the onus back on the farmer with GlobalGAP, because they are worried about getting sued.[156]

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[149] Respondent vi
[150] Respondent xvi
[151] Respondent iii
[152] Respondent v
[153] Respondent vi
[154] Respondent v
[155] Respondent iii
[156] Respondent ix

One respondent suggested the global supply chains of large retailing organisations provided a special case for more stringent quality and safety control. Global acquisition, it was said, would lead retailers to "require some guarantee of quality – especially from third world countries"[157]. While a couple of respondents believed that standards "put producers into competition with each other"[158] to drive down prices, this was contested by another grower who said that, "Woolworths said if we didn't certify they wouldn't buy our fruit but that isn't the case. They would have to buy our fruit because the volume of fruit that is certified isn't there"[159] Nonetheless, most submitted that the ability of retailers to shift the responsibility for safety and quality back onto producers was evidence of the increasing power of retailers. In the words of one respondent, "they have so much power that they can do what they want"[160].

This led to some producers perceiving a loss of control over their businesses, their production techniques and their industry. As one informant asserted, "What should be remembered is that this is our land"[161]. Others made comments such as:

- We have no ability to influence [increasing demands by supermarkets] to any degree at all. We have no comeback from that.[162]
- We can't do a damn thing about it. They control the supply chain from paddock to plate.[163]
- There is nothing to be done about Coles and Woolworths. They set the prices and the standards and we have to agree to them.[164]

The perception of inequalities in the power dynamic was serious enough that a handful of orchardists questioned their future in farming:

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[157] Respondent ii
[158] Respondent vi, iii
[159] Respondent ii
[160] Respondent xv
[161] Respondent iii
[162] Respondent vi
[163] Respondent iii
[164] Respondent xiv

- We don't know whether we are doing the right thing. The missus and I really wonder, you know. You think is this what we should be introducing our own to – or will there be anything to leave?[165]

- We wonder whether we have done the right thing staying on the farm. Maybe we should have left to pursue something else?[166]

With connections made between the power of retailers and the development of private standards, one respondent summed up, "that Coles and Woolworths and whoever else can tell us what *they* want, and that we then do it, gives an indication of the power dynamic"[167].

6.5 Control of production processes

Discussions about power were also linked to control. Respondents made a wide range of emotive remarks concerning the extent to which retailers assert their control over the supply chain. Overwhelmingly, respondents voiced concerns about the size and concentration of major retailers and their increasingly stringent production requirements. This was of concern because respondents believed that retailers were part of a growing group of stakeholders that each asserted their own process requirements onto producers. Thus, many viewed the onslaught of private standards as a growing trend that removed control over production from orchardists, citing numerous standards; "You've got HACCP, SQL, Freshcare, GlobalGAP, WQA, OH&S, standards for the Coop. Where is it going to end?"[168] The specific end-product requirements of retailers were also of concern. For example:

> You have to have the 'right' product, it has to be the 'right' size, look and whatever the supermarkets want. And they shift the goal posts all the time – there are new

[165] Respondent iv
[166] Respondent xv
[167] Respondent xvi
[168] Respondent xv

> requirements about three times a year. The supermarkets do anything they can to keep the price down.... They try to drive the price down as much as they can.[169]

Similarly, another suggested, "Woolworths and Coles are a law unto themselves. They really are. They demand this and that, and make sure they are always in control"[170]. There was a substantial amount of frustration levelled at retailers from some growers:

> The supermarkets are bastards. The supermarkets have the power. They control everything and standards are making it more like that.[171]

Some respondents suggested that the inadequacies of quality control once produce is turned over to retailers was evidence that retailers, "cared more about controlling the industry"[172] than ensuring that safe, high quality produce was available to consumers. These respondents questioned the need for stringent production processes for producers to manage food safety and quality risks if the same risks are not managed once the produce is in the retailers' possession. Specifically:

- Even though we go through the hygiene requirements [of GlobalGAP], a lot of people touch our fruit after it leaves here. What about the supermarket employees? What about the customers? There are not guidelines in place in the supermarket instructing customers and employees not to touch the fruit unless they have washed their hands. The responsibility is being put back on the farmer instead of the supermarket being responsible for what are partly their own actions[173]
- They demand that we send fruit out here at a certain temperature. But it can sit outside their store in the sun for six or eight hours. We have seen it.[174]

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[169] Respondent xii
[170] Respondent viii
[171] Respondent xi
[172] Respondent xv
[173] Respondent iii
[174] Respondent viii

- A little lady told me about how she dug her fingernails into fruit to taste it before she bought it, and if it wasn't sweet, she wouldn't buy it. I couldn't believe it. And the retailers try to put the onus back on the farmer.[175]

In summary, one respondent observed:

> It's reasonably safe to say that retailers are about trying to control producers, suppliers and whoever else they deal with. If [food safety and quality standards] were about trying to get good quality, safe produce into the shops, you would see better quality control in the shops. You would have measures to stop everyone touching the fruit, like packaging, and you would not see bad quality produce being sold.[176]

Thus, while these producers could see the necessity and value in underwriting food safety and quality, they considered food standards to represent an effort by retailers to devolve responsibility for safety and quality onto other supply chain actors, including producers.

6.6 Retailer manipulation

Respondents suggested that retailers had manipulated the Cooperative on numerous occasions, taking advantage of the distance between the sites of production and sale. Due to this geographical distance, Cooperative members were unable to regulate or monitor the actions of retailers once produce arrives at distribution centres. Informants suggested that on numerous occasions, retailers had renegotiated the agreed price on arrival of the produce. For example:

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[175] Respondent iii
[176] Respondent viii

> They take our fruit and hold it for six weeks. Or they wait until the fruit has arrived and then say that there was something wrong with it, and try to renegotiate a cheaper price. And by that time no one else wants it either. They drop the price just like that[177].

With producers unable to re-inspect the fruit, retailers are able to demand price reductions. It was suggested that particular retailers and markets have manipulated this situation in an effort to maximise profits. A member of the Board of Directors lamented the problems they had faced in the past regarding this issue:

> Buyers know that if they complain they get money off the original price. They take photos that show fruit that has something wrong with it but when you look at the photos closely you can see it's all the same fruit, just moved around a little. We can't get there in time to really inspect it properly so what can we do? We have no choice but to agree to drop the price to the quality classification they say it is. And they are the ones who set the quality classification[178].

It was also suggested that retailing chains mixed high quality and low quality produce, or certified and non-certified produce, charging consumers for high quality produce. Several respondents claimed to have found evidence of these scenarios in supermarkets and retailer distribution plants. In one instance, a respondent alleged that they had had photographic evidence confiscated by the management of the retailing organisation. Producers were often angry about the perceived lack of accountability of retailers in these situations:

- We know what has been sold to who, and we know where the good quality produce goes. And when you go to the shops and see your own high quality produce with labels on it mixed up with fruit with no labels, or with someone else's label... and you know you haven't sold them mixed grade produce.. or you know that other company isn't certified. It makes you angry.[179]

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[177] Respondent xi
[178] Respondent viii
[179] Respondent iv

- We know that [retailer x] is buying from people with no Freshcare certification – or any other certification. We know the people that are not certified and we see their produce with labels on it in the stores. That's why we think these standards are bullshit.[180]

- The ratio of our good fruit is much higher than other producers – I think ours is about one per cent juicing fruit. So we should be getting much more than other growers. But we don't get much more, and sometimes the supermarkets mix ours in with lesser quality fruit – we see it at the supermarkets ourselves[181].

It is worth noting that respondents pointed to both Australian and international retailers that had 'cheated' the Cooperative with price and quality agreements. Respondents alleged commonly that they knew personally of producers that were not GlobalGAP certified but continued to sell to retailing chains that usually required GlobalGAP certification. In spite of this, in relation to the grievances of the Cooperative, complaint handling mechanisms for GlobalGAP have been "unsatisfactory or absent"[182]. Moreover, respondents were not empowered to make complaints:

> I thought about making a complaint about the standards. But it is a standard set of requirements, so it is unlikely that they will be flexible, even if they aren't relevant. And who do you complain to – a website? The auditors?[183]

This is largely because GlobalGAP management is not readily accessible for making complaints and third party certifiers are the 'face' of the standard.

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[180] Respondent iii
[181] Respondent iv
[182] Respondent vxi
[183] Respondent i

6.7 'Levelling the playing field'

The belief of many respondents that the quality of their produce was diminished on occasion by the actions of retailers led respondents to consider the actions they could undertake to "level the playing field"[184]. Many believed that a focus on quality was valuable for both consumers and producers. They suggested that there was a potential to harness consumer power to demand high quality produce:

- We have to educate consumers to start demanding top quality produce. We need to educate them about what we do in our operation, and how the supermarkets are responsible for pushing costs down, and reducing the quality of the fruit they are eating. It's about the consumer.[185]

- The lack of information that the consumer has is a serious problem. The consumer doesn't know how to figure out where the fruit is coming from or how it has been treated. And even if all the information was there, the consumer would have to be an expert to know the difference between them all. I guess that means we have educate them to make sure we get a fairer go.[186]

- We have to find a way to make advantage out of the quality that consumers demand, to get something out of it and get ahead. How to address consumers needs and demands is the issue. Food safety and quality is being forced onto the consumer more and more.[187]

- Its no good trying to convince the chain stores, because they will do whatever they want to do, and make any money they can out of it. But if the consumer says I want x, then retailers will need to cater to that demand. If consumers were aware of GlobalGAP, and demanded GlobalGAP certified produce, it would make the certification scheme so much more relevant and achievable. And growers would be happier if they knew that if they grew their fruit to these standards, they would achieve something extra. The consumers

[184] Respondent iii
[185] Respondent xv
[186] Respondent iii
[187] Respondent vi

> have to be the ones to put the pressure on. And then its back to us to let consumers know[188].

A main problem for producers wishing to educate consumers is that Freshcare and GlobalGAP are business-to-business standards, meaning producers are unable to label their produce as GlobalGAP or Freshcare certified. Thus, these standards remain invisible to consumers. In spite of this, the Cooperative had investigated using small stickers seen on mandarins as a way to inform consumers about the quality of their produce. At the time the field research was conducted, Gayndah Packers had an advertisement on commercial television to inform consumers that only the highest quality produce was labelled with stickers. While this was useful in informing consumers about how to differentiate quality, it did not identify certified from non-certified produce. The response to the campaign was unclear at the time of interviews, although one respondent observed, "at the moment there are so many different systems for everything, many of which are misleading, so consumers don't or cant keep up with it"[189].

Several respondents also discussed the possibility of creating informal networks with geographically diverse producers to investigate disputes about the quality of produce once it arrived in retailer distribution centres, although this had not been initiated at the time of data collection. In the future, this may provide a mechanism through which producers are able to inspect one another's produce:

> If we could get together some kind of network of people it would be harder for big businesses to manipulate and carry on. But if we knew growers overseas, that could go to have a look at what is said is wrong with the citrus, they wouldn't have a leg to stand on. And we could do the same thing here. I mean, it's a lot easier for us to race to Brisbane than it is to jump on a plane to England.[190]

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[188] Respondent vi
[189] Respondent vi
[190] Respondent viii

> What we are looking to do is set up with a few other producers and have an export forum so that if there is something wrong with the fruit or the price is suddenly contested, they get up there and sort it out because we cannot do it by ourselves.[191]

Thus, there were at least two strategic responses being investigated by Gayndah Packers to minimise the impacts of some of the "dirty tactics"[192] used by retailers in trying to drive down prices.

6.8 Market selection

In spite of the aforementioned, some respondents pointed out that there were advantages in certifying to GlobalGAP. For example, certification to multiple schemes had enabled the Cooperative to be market-selective, and through GlobalGAP, Gayndah Packers was able to access European markets when market prices were more favourable. It had also given Gayndah Packers greater market mobility when dealing with Coles or Woolworths, although the transaction costs associated with shifting between retailing organisations was not discussed in the course of this research. Several producers suggested that this was particularly advantageous for Australian producers where just two retailers control a large proportion of the domestic market. In the words of one respondent:

> It will be good for us if we are able to pick and choose. Coles and Woolworths are a law unto themselves, and there is not much we can do about it. So being able to pick and choose could be good for us. Our size limits movement a bit, but I think it would help anyway.[193]

In this case, certification to GlobalGAP might allow producers to move away from dealings with undesirable retailers, forcing a fairer relationship between the two groups.

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[191] Respondent viii
[192] Respondent iii
[193] Respondent viii

Since GlobalGAP certification, Gayndah Packers produce had been favoured over other non-certified produce. Although this did not yield price premiums, it did secure sales. However, this may cease if GlobalGAP does become baseline market standard. There is some constraint in the ability of the Cooperative to realise these benefits, due to the large quantity of fruit produced which, as previously noted, restricted the extent to which the Cooperative could move between markets. Buyers are less likely to purchase large quantities of produce at short notice, or trade with new producers in such large quantities, leaving only a small proportion of produce able to be shifted in this way.

6.9 GlobalGAP environmental focus

GlobalGAP media releases highlight that the development of the standard was specifically in response to consumer concerns about food safety, and environmental and social welfare in food production:

> *The GlobalGAP standard is primarily designed to reassure consumers about how food is produced on the farm by minimising detrimental environmental impacts of farming operations, reducing the use of chemical inputs and ensuring a responsible approach to worker health and safety as well as animal welfare (Eurep, 2008).*

Integrating food safety and quality with social and environmental goals to promote what can be described as a 'triple bottom line' focus, GlobalGAP responds to calls for greater social and environmental awareness, and provides an avenue for retailer-members to demonstrate their commitment to responsible production techniques. However, the above issues of legitimacy, power and control in many ways appear to undermine the likelihood of the standard achieving its aims. Furthermore, the respondents in this study either did not know that the standard took a triple bottom line approach or questioned the inclusion of social and environmental goals, arguing that their inclusion was redundant because landholders cared for the environment or that the inclusion of environmental goals would be unlikely to bring about change. A couple of producers

suggested that the inclusion of such goals was a political project, while a handful supported the environmental attributes they deemed relevant. These issues will be explored in turn below.

6.9.1 Environmental goals

For the most part, respondents did not consider GlobalGAP to have an environmental focus or to promote a 'triple bottom line approach', raising serious questions as to the extent to which GlobalGAP really does promote social and environmental goals alongside traceability and safety. While the standard does contain control points addressing environmental and social goals (Appendix A), they were missed or not considered as environmental or social by many respondents. The contribution of GlobalGAP to environmentally responsible agriculture was questioned through comments such as, "GlobalGAP hasn't changed the way we think about environmental issues – not in our case anyway. We never thought of it to have an environmental focus"[194]. Instead, the vast majority of producers suggested that GlobalGAP attempted to promote traceability[195], quality control[196] and the health and safety of workers[197] above all else, highlighting that, "GlobalGAP is trying to push accountability and traceability, but not much more than that."[198]. This may have been the result of producers viewing the requirements as production-focussed rather than environmentally focussed as highlighted by the following observation:

> We have planted wind-break trees around the property, although I don't really look at that as conservation because it is an effective way of managing wind on the property and the effects on the fruit. I am not saying I don't think it's a good thing from an environmental perspective, but it is important to my operation that I am able to control the wind across the property[199].

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194 Respondent ii
195 Respondents ix, xiii, xii, xiv, ii, xi, iii, v, viii, xvi
196 Respondents i, iv, xv
197 Respondents xiii, ix.
198 Respondent x
199 Respondent vi

Nonetheless, for some respondents the inclusion of environmental goals was "unnecessary" and "insulting", and many of these comments stemmed from concern about the appropriateness of European retailers detailing production practices for Australian producers. Only one respondent viewed GlobalGAP as a genuine attempt to promote "environmentally and socially responsible"[200] agricultural practices.

6.9.2 Duplication of requirements

The inclusion of environmental goals was seen as being "unnecessary"[201] to many growers who suggested that, "growers have to be environmentalists at heart anyway"[202]. This was because the nature of "having your livelihood and your past and your future invested in the land"[203] meant growers had to remain conscientious about environmental impacts if they wished to ensure the sustainability of their land. This, it was commonly suggested, made the inclusion of environmental control points "redundant"[204].

> We are conservation minded anyway. GlobalGAP didn't and won't change that. We rely on the land for our future. We want to pass it down, and we need our farms for our families. I don't have any real choice in the matter; I have to make sure our practices are sustainable.[205]

Thus, although growers often identified themselves as "greenies in some sense"[206], respondents were critical of the inclusion of environmental control points in GlobalGAP.

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[200] Respondent xvi
[201] Respondent xvi
[202] Respondent v
[203] Respondent xii
[204] Respondent viii
[205] Respondent v
[206] Respondent xiii

This was generally expressed as frustration at what some growers perceived to be "micro-management of orchardists and the way we do things"[207], and the GlobalGAP assumption that "we have no common sense as far as the environment and health risks go"[208]. For example, several respondents talked about their implementation of Integrated Pest Management (IPM), which has been encouraged by various organisations, but is not a legislative requirement for growers. Yet growers have incorporated IPM for a number of reasons. One respondent suggested that broad public responses to the use of agro-chemicals created pressure for growers to adopt IPM:

> The government has pushed water management. Pest management and chemical reduction hasn't been addressed so much, but most of us have taken it on doing IPM by ourselves because of the way the industry has had to become. If we didn't there would have been public outcry.[209]

Another grower suggested that the driving force for change was closer to home:

> We wanted to get into IPM because we wanted to reduce our chemical use. We live with our kids on this property, in this town. People we know walk out and pick fruit from the orchards, and we do it too. We don't want to be giving a person citrus that has been sprayed beyond belief.[210]

In spite of growers adopting IPM by themselves, they did not support its inclusion in GlobalGAP. Addressing GlobalGAP requirements on IPM was a source of frustration that pushed growers to reject environmental requirements:

> It's a waste of time, GlobalGAP taking up on the environmental side of things. That has nothing to do with producing fruit. What needs to be covered from an environmental point of view is covered already by government bodies. I don't think they should take on those points because they are already addressed, but they do, so we need to focus on

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[207] Respondent ii
[208] Respondent iv
[209] Respondent v
[210] Respondent i

> them too. But those little issues that aren't relevant are deterrents for growers, they make us dig our heels in.

This resistance of GlobalGAP requirements was described by one auditor who had observed the industry over a number of years:

> In the last 15 years farmers have gradually grown to understand how their farms are part of the environment and what the impacts are. They did that off their own backs, but now that they are virtually being forced – its virtually the law – to understand and manage their environmental impacts and they are kicking back and they don't want to. And that was something they used to be happy to do.[211]

This was suggested to be, in part, due to the perceived irrelevance of GlobalGAP by some producers, and fed in to questions of legitimacy. Informants expressed in-principle support for private sector participation in environmental management in general, but more often than not, the management aspects, such as those contained within the 'environmental' control points of GlobalGAP (Appendix A), were not viewed favourably by respondents. For example, many were critical of the 'management plans' included within the GlobalGAP standard. It was suggested that these types of requirements extended "above and beyond"[212] the relevant focus for retailing organisations, and required orchardists to "waste time writing about the positive changes we could make, instead of spending time in the orchard doing them."[213] Some respondents interpreted these inclusions as an indication of loss of control over their production practices, even though most admitted that these had changed very little since certifying to the standard. Still, these inclusions were seen by many respondents as excessive, and many drew attention to the potential for standards to impact the willingness of respondents to meet a "forever changing set of requirements"[214]. One informant summarised a commonly cited response:

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[211] Respondent x
[212] Respondent i
[213] Respondent vii
[214] Respondent ix

> Environmental standards are not relevant to producing a piece of fruit for someone to eat. I think they are important but I don't think there is any relevance to how we produce fruit. What should be remembered is that this is our land. We want to be able to keep it in our families. We do not want to damage the environment. Whose business it is what we do on our land? Tell me, if you can?[215]

In contrast, the environmental aspects of GlobalGAP that were considered by respondents to be "practical"[216] tended to be regarded more favourably. For example, respondents spoke positively about control points related to chemical management and pest management. These areas were not specifically identified as 'environmental' control points but informants grouped them under the broad banner of 'environmental', noting that they contributed environmental benefits. In these cases, informants could "see the tangible benefits, which make it worthwhile"[217]. As one respondent elaborated:

> You don't mind with the practical things like changing chemical applications. It's when you have to sit down at a desk and work for hours on something to show how you use water that you wonder how useful it is. Because you already know anyway. It's in your head. And you are not going to waste it. Not at that price.[218]

Thus, a distinction was made by respondents on the grounds of 'practical' environmental measures that had greater support within the Cooperative.

6.9.3 Inciting change?

With environmental control points almost entirely "recommended" and no minimum compliance requirement for GlobalGAP "recommended" control points, most respondents suggested the environmental goals of GlobalGAP would be overlooked. As one respondent observed, "I think a lot of growers will prioritise what GlobalGAP prioritises. We just try

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[215] Respondent iii
[216] Respondent x
[217] Respondent vi
[218] Respondent vi

to retain our certification."[219] Others suggested that they "were flat out getting the major and minor compliances organised"[220], which constrained their "opportunity to do the recommended points"[221]. In the words of one grower:

> There is no way I would do the recommended points unless I had to do them. I just wouldn't do them. I have enough work to do – and especially now with all the extra paperwork for GlobalGAP.[222]

Several respondents linked concerns with recommended control points and compliance criteria, and the environmental aspects of GlobalGAP, noting that this section "falls off the radar"[223] for many growers:

> If that part of the audit is all recommended points, you prioritise in your normal pattern of thinking to get through these things, so the recommended compliance points are going to be the last priority. They certainly fall off the radar a little bit, and you do what you need to in order to get through. The more important things are things that are major and minor compliance points, and we focus on those.[224]

Another respondent indicated that the costs of some predominately 'environmental' practices such as shifting from flood irrigation to overhead sprinklers, could be prohibitively expensive, meaning respondents would not make changes unless forced: "After all, its been a long time since we have had a good season here"[225].

Some respondents questioned the global level changes that GlobalGAP would really make by addressing environmental and social goals given their belief that retailers continue to buy uncertified produce: "We can do all these things, and the supermarkets will still buy produce from wherever is the cheapest – even if its China, where they irrigate with pure human sewage, so what

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[219] Respondent x
[220] Respondent iii
[221] Respondent iii
[222] Respondent i
[223] Respondent ii
[224] Respondent ii
[225] Respondent xii

is the point?[226] A similar point was raised by another respondent with regards to social goals, who said, "I know they still buy fruit out of South America where they are on nothing an hour and nothing to eat."[227] Nonetheless, it was concluded that certification to Freshcare and GlobalGAP had helped to separate "the cowboys from the better farmers" within the Cooperative by ensuring the less environmentally conscious growers were "more careful, or they couldn't sell their fruit"[228]. This was also attributed to the requirements of the Cooperative, highlighting that the environmental goals of GlobalGAP were reasonably closely aligned with the goals of Gayndah Packers:

> Being part of Gayndah Packers has moved the growers in the direction of thinking more carefully about how they manage their properties, environmentally, socially, economically. But I don't think GlobalGAP has changed or enhanced that.[229]

These concerns were framed by questions about the real motivations behind GlobalGAP. One sceptic observed: "the point of this whole exercise is just to give someone a job, and make someone money[230], while another suggested that retailers "don't care about the environment", but are involved in standards development because "there is a market advantage in it"[231].

6.10 Summary

The treatment of producers by retailers suggests that retailers have substantial influence over the Cooperative. Certification to multiple standard schemes attributed some power to producers, who were able to negotiate between different retailing organisations. While there were some benefits in doing so, the difficulties highlighted in this chapter suggest that, while the power disparity between producers and retailers may be offset to some extent due

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[226] Respondent iii
[227] Respondent viii
[228] Respondent vii
[229] Respondent viii
[230] Respondent viii
[231] Respondent viii

to the bargaining power of producer groups, inequitable power relations continue to affect trade relations, even for larger producer groups such as Gayndah Packers. The examples raised by producers also indicate that manipulation of the producer-retailer relationship is not directly related to GlobalGAP or other standards in this study. Instead, other conditions such as the distance between production and consumption contributed to a situation where powerful retailers were able to manipulate producers. For the producers in this study, these issues, as well as questions surrounding legitimacy and control, undermined the environmental goals that GlobalGAP seeks to achieve.

7 Conclusion

7.1 Introduction

This thesis questioned the extent to which privately developed food standards, in particular GlobalGAP, would lead to a relinquishment of farmer control over production processes. It was submitted that while GlobalGAP may be evidence of a strengthening of the market power of retailers as well as a mechanism through which retailers can assert their needs onto downstream supply chain actors, understanding the implications for producers would require considerable sensitivity to the different abilities of individual producers to respond to this change. Much of the existing literature fell somewhat short of identifying the range of impacts for producers, depicting them as passive recipients of change without either exploring the distinctions in how different farmers might respond or acknowledging the broad assumptions made in doing so. The actor-oriented approach suggests that while some producers may be adversely affected by standards like GlobalGAP, others will cope with this change, and will "actively strategise in terms of their own projects" (Long, 2001:44). While regulation theory provided valuable detail about the global economic conditions that supported the role of large retailing organisations as the coordinators of supply chains, the actor-oriented approach highlighted that broad theorising about the impacts on farmers would not adequately account for the multitude of implications and responses, thence providing a framework for exploring how different producers may be affected. It should be noted that while this chapter seeks to extrapolate as to what the findings may mean at a macro level, this study undertook a case study, and the results are representative only of the implications for the members of the Gayndah Packers' Cooperative.

7.2 Key observations

In considering the findings of this study, several points warrant emphasising. First, the diversity in responses from the previous two chapters largely substantiates that there are a multitude of producer impacts from the same structural change, even within a close-knit producer group. For

example, while some producers left the Cooperative seemingly as a direct result of certification to GlobalGAP, others attempted to determine networking pathways to minimise the likelihood of manipulation by retailing organisations. Of the producers that remained in the industry, some indicated that GlobalGAP was an administrative imposition, others suggested the administrative requirements of the standard were lacking. The "negotiation and struggle over boundaries" and the "search for space to manoeuvre" that Villarreal (1992) suggested occur as the result of change are indeed documented in the multiple responses and trajectories of Cooperative members, underscoring Long's assertion, that to expect changes related to globalisation to have uniform impacts everywhere is 'misguided' (Long, 1987: 214). Thus, while it has been inferred that private standards will result in a production environment defined by certification or lack thereof, this too seems a "deceptively simple" conclusion.

Second, GlobalGAP, involves a powerful agenda for supply chain reform on the part of retailers, and, in and of itself, is evidence of the extent to which large retailing organisations are able to coordinate supply chains. The standard is not mandatory and producers could opt to trade with retailers that do not require GlobalGAP certification. Indeed, the legitimacy of the standard is underwritten by the producers who bemoan it in that, without adequate quantities of certified produce, the standard would be meaningless (Ransom, 1997). Yet with growing numbers of producers certifying to GlobalGAP, and the standard fast being adopted by key retailing chains outside of Europe, GlobalGAP is quickly becoming the production 'baseline' standard for a growing number of mainstream markets. While evidence suggests that retailers continue to purchase produce from uncertified farmers, the continued inclusion of uncertified producers in lucrative European markets seems unlikely if the number of certified producers continues to grow. Thus, while the standard itself is not mandatory for producers, when combined with an increasingly competitive marketplace, certification becomes a virtual requirement. Within this relationship, it seems that retailers 'cheating' producers will occur, although in this study it was not GlobalGAP or Freshcare *per se* that led to the manipulation of producers. Instead, other aspects of the relationship between producers and retailers had resulted in disputes about price and quality.

The powerful agenda of GlobalGAP and other retailer driven standards suggests that while producers did undertake strategic actions to refrain from cooption by the demands of retailers, there are limited means through which producers will be able to 'level the playing field'. Indeed, most respondents in this study expressed frustration about the extent to which they were forced to follow the requirements of powerful organisations. Thus, while some producers were able to cope with the structural changes and "actively strategise in terms of their own projects" (Long, 2001:44) to, for example, strategise with other producers or leave the Cooperative altogether, many were unable or unwilling to make these changes, and were forced to meet the requirements set for them. This may have been exacerbated by cooperative membership.

Third, GlobalGAP is just one of a number of requirements farmers contend with from multiple actors. Over the last decade or more, government agencies, industry bodies, consumers and civil society organisations have developed requirements that producers must comply with including environmental plans and occupational health and safety requirements. The Cooperative itself also placed requirements on producers to meet a number of quality standards. The few changes required for certification by the producers in this study can be explained to some extent by the requirements of other organisations preceding the GlobalGAP control points and aligning producers with production processes required for certification. When it came to the social and environmental aspects of production, government requirements in some cases were the same as GlobalGAP requirements and had predated GlobalGAP. While producers may be losing control of their production processes, this suggests a more nuanced shift in control to a number of actors including but not limited to, large retailing organisations.

Fourth, the rapid uptake of the standard by both certifiers and producers, and the rallying around GlobalGAP by technology companies, government and civil society organisations, highlights the growing numbers of actors that the standard may ultimately influence. However, the impacts of GlobalGAP are likely to be felt at a broader level than is currently accounted for, with this study suggesting that other supply chain actors such as input suppliers and contract labourers will also be impacted, potentially forcing a renegotiation of supply strategies and relations. So while it is only producers that certify to GlobalGAP, in effect, many other aspects of the production process are required to have knowledge of and accommodate the requirements of that standard. The

non-representation in key GlobalGAP committees of a variety of stakeholders, such as civil society organisations and producers in the developing world, is of even greater concern given the increasing numbers of actors GlobalGAP impacts upon, and these issues together will be further exacerbated if GlobalGAP achieves the integrative goal Eurep initially envisaged for the standard.

Fifth, certification to GlobalGAP had advantages for producers. Gayndah Packers secured sales over other producers on the basis of certification and, due to multiple certifications to Freshcare, ISO9000 and GlobalGAP, the Cooperative was able to be market selective; shifting when prices varied or when conditions or the working relationship with a particular retailer was favourable. Individual producers in some cases gained through efficiencies derived as a result of GlobalGAP documentation requirements. However, these benefits were obtained through personal investment, absorbing monetary costs and additional labour associated with certification. They are likely to be less advantageous in the long run if growing numbers of producers continue to certify to GlobalGAP.

Sixth, there were significant benefits for producers in certification to GlobalGAP as a group. This option is generally associated with lower certification costs and less responsibility for individual farmers. There is, however, an increase in the requirements of the Cooperative which, as an organisation, is required to implement its own quality management system. Nonetheless, respondents found that certification through the Cooperative had provided them with valuable support. Furthermore, in the future producers may be able to take advantage of the size of the Cooperative in dealing with other groups of producers to offset at least of the power wielded by retailing organisations. In light of the potential for GlobalGAP to deepen or reproduce inequalities by excluding those that do not have the capacity to upgrade, cooperatives and other strategic alliances may be beneficial for small growers to compete efficiently, or to 'level the playing field' between producers and retailers. They may also provide a means for smaller producers and producers in the developing world to share the financial burden of certification and auditing for GlobalGAP and other standards.

Seventh, there are significant problems with GlobalGAP achieving any real change in promoting environmentally and socially focussed production regimes. Respondents questioned the relevance

of these aspects of the standard, and the legitimacy of the standard itself. Though the cultural specificity of the GlobalGAP standard is comparatively not as far removed from the Australian farmscape as other regions, the European development of a standard that may become necessary for Australian producers was problematic for some informants. Furthermore, requirement of environmental checkpoints not only as part of GlobalGAP certification but also as a government requirement caused some producers to resent these inclusions and indeed to 'do the bare minimum' required. As evidenced in this study, it appears to achieve little in these domains, with testimony consistent with that of other studies that have suggested the inclusion of minor and indirect environmental objectives is likely to have a limited ability to effect change in environmental management (Valentine et al, 2006). Taken together, these points suggest that there are basic logical inconsistencies between the rhetoric and the achievable reality of GlobalGAP. As the preceding chapters detailed, many of the specific objectives of GlobalGAP will struggle to fulfil their stated outcomes with success. On the one hand, GlobalGAP is said to represent the desires of consumers. However, in reality they achieve little in social and environmental welfare. Instead of representing the goals of consumers and ensuring a participatory approach to development in the agri-food system, GlobalGAP appears to promote the goals of retailing organisations alone.

7.3 Directions for further research

This study highlights several directions for future research. First and foremost, much more research is required about how involvement with private standards like GlobalGAP affects producers. As an exploratory study, this research has highlighted multiple issues for producers. However, if retailer led standards are becoming *the* dominant driver in the agri-food system, it is imperative to grasp in totality how producers across a wider range of industrial production settings will be affected. This may be useful to build industry or government coordinated certification assistance. Second, more research is required into the certification outcomes for producers that certify individually to GlobalGAP. Many currently available studies are based on Cooperatives and other producer groups, the impacts on whom may be muted by the support

networks available. Conversely, the implications may be less severe due to individuals being able to make decisions for their own best interests. However, many of the findings in this study would not have been applicable for producers seeking individual certification, nor would the motivations for certification in the first place. Furthermore, with Australian farming practices closely aligned to those in Europe, Australian producers may not experience the range of impacts that certification has for Southern producers. There are currently too few empirical studies that evaluate the outcomes of certification for producers, or more importantly, how producers can be accommodated in these increasingly mainstream supply chains. Finally, with evidence suggesting that there are implications of private standards like GlobalGAP reaching well beyond producers and retailers, there are too few studies that evaluate the how the outcomes for other input suppliers, such as farm labourers, machinery companies and rootstock suppliers, are being played out.

7.4 Concluding remarks

Returning to the opening paragraph of this thesis, there are remarkable parallels between the production conditions farmers faced over a century ago and the current day. Again, producers are facing decreasing profits, global market integration and competition from international producers. However, there are subtle, yet important distinctions. Instead of a global market driven by the increasing frontiers of leading economies, the global marketplace today is driven by the increasing frontiers of transnational corporations, and the changing tastes of consumers include not only food properties or flavours but preferences for specific production processes. Retailers are positioned at the apex of these supply chain changes. Although any evaluation of the extent to which producers are relinquishing control over production processes is dependant on what constitutes ones definition of 'control', there appears little doubt that retailers play a significant role in directing the processes behind production through private standards like GlobalGAP.

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9 Appendix A

Control Points and Compliance Criteria Source: Eurep, 2007d

Integrated Farm Assurance (All farm base)

Principles

This document sets out a framework for Good Agricultural Practices (G.A.P.) on farms which defines essential elements for the development of best-practice for the global production of crops, livestock, and aquaculture acceptable to the leading retail groups worldwide. However, standards for some individual retailers and those adapted by some producers may exceed those described. This document does not set out to provide prescriptive guidance on every method of agricultural production. GlobalGAP (EUREPGAP) members wish to recognise the significant progress already made by many producers, producer groups, producer organisations, local schemes and national schemes in developing and implementing best-practice agricultural systems. GlobalGAP (EUREPGAP) members also wish to encourage further work to improve producers capability in this area, and in this respect this GAP framework, which defines the key elements of current good agricultural best-practice, should be used as benchmark to assess current practice and provide guidance for further development.

The modular composition of Integrated Farm Assurance enables producers to combine multiple audits for multiple products into one single audit.

GlobalGAP (EUREPGAP) offers several benefits to producers:

1. Reducing Food Safety risks in Global Primary Production

- Encouraging the development and adoption of national and regional farm assurance schemes
- Clear risk assessed HACCP based reference standard serving the consumer and food chain
- A technical communication platform for continuous improvement and transparency through consultation across the entire food chain

2. Reducing Cost of Compliance

- Avoiding multiple product audits on mixed farming enterprises by a single "one-stop-shop"

- Avoiding the proliferation of buyer requirements, as committed GlobalGAP (EUREPGAP) Retailer and Food Service Members shift their supply to GlobalGAP (EUREPGAP) approved
- Avoid excess regulatory burden by pro-active adoption by industry
- Achieving global harmonisation leading to a more level playing field
- Producers choose from certification bodies strictly regulated by GlobalGAP

3. Increasing the Integrity of Farm Assurance Schemes worldwide by

- Defining and enforcing a common level of auditor competence
- Defining and enforcing a common level of verification status report
- Defining and enforcing a common level of action on non-compliances
- Harmonising interpretation of compliance criteria

Independent Verification

Producers receive their GlobalGAP approval through independent verification from a certification body that is approved by GlobalGAP.

The Scheme documents are:

1. *GlobalGAP (EUREPGAP) General Regulations* which sets out the rules by which the standard will be administered.
2. *GlobalGAP (EUREPGAP) Control Points and Compliance Criteria (CPCC)* is the standard with which the producer must comply, and which gives specific details on each of the requirements.
3. *GlobalGAP (EUREPGAP) Checklist* which forms the basis of the producer external audit and which the producer and producer groups must use to fulfil the annual internal assessment requirements.

As described in GlobalGAP (EUREPGAP) General Regulations, this scheme is divided into Major Musts, Minor Musts and Recommendations. All control points must be audited externally, as well as included in self-assessments (Option 1) and internal group inspections (Option 2). The possible answers are: compliance (yes), non-compliance (no) or Not Applicable (N/A). Where the

answer is Not Applicable, a justification must be presented. The N/A verdict cannot be given to those control points where the Compliance Criteria specify "No N/A". Evidence must be given for all Major Must Control Points. The GlobalGAP (EUREPGAP) IFA CPCC document is separated into different modules, each one covering different areas or levels of activity on a production site.

These sections are grouped into:

1. "Scopes" covering more generic production issues, classified more broadly (All Farm Base, Crops Base, Livestock Base and Aquaculture Base).

2. "Sub-scopes" covering specific production details, classified per product type (Fruit and Vegetables, Combinable Crops, Coffee (green), Tea, Flowers and Ornamentals, Cattle & Sheep, Pigs, Dairy, Poultry, Salmon and Trout and any sub-scopes that might be added during the validity period of this document)

Legislation overrides GlobalGAP (EUREGAP) where relevant legislation is more demanding. The compliance level for legislation is a "Major Must". Where there is no legislation (or legislation is not so strict), GlobalGAP (EUREPGAP) provides a minimum acceptable level of compliance. No matter what the required level of compliance is in GlobalGAP (EUREPGAP), any applicable legislation that is stricter than GlobalGAP (EUREPGAP) must be complied with in the country where the producer is operating.

Reference guidelines are provided separately and are updated independently of this document as needed. Users should always refer to the latest reference guidelines, available on www.globalgap.org

ALL FARM BASE			
	Control Point	**Compliance Criteria**	**Level**
	Farm Base: *Control points in this module are applicable to all producers seeking certification as it covers issues relevant to all farming businesses.*		
AF . 1	**RECORD KEEPING AND INTERNAL SELF-ASSESSMENT/INTERNAL INSPECTION:** *Important details of farming practices should be recorded and records kept.*		
AF . 1 . 1	Are all records requested during the external inspection accessible and kept for a minimum period of time of two years, unless a longer requirement is stated in specific control points?	Producers keep up to date records for a minimum of two years from the date of first inspection, unless legally required to do so for a longer period. No N/A. (For Livestock certification, cross check with LB.3.2, PG.1.3 and PG.4.3 where documents are required for 3 years)	Minor Must
AF . 1 . 2	Does the producer or producer group take responsibility to undertake a minimum of one internal self-assessment or producer group internal inspection, respectively, per year against the GlobalGAP (EurepGAP) Standard?	There is documentary evidence that the GlobalGAP (EurepGAP) or benchmarked standard internal self-assessment/internal producer group inspections under responsibility of the producer/producer group ha(s)ve been carried out and are recorded annually. No N/A.	Major Must
AF . 1 . 3	Are effective corrective actions taken as a result of non-conformances detected during the internal self-assessment or internal producer group inspections?	Effective corrective actions are documented and have been implemented. No N/A	Major Must
AF . 2	**SITE HISTORY AND SITE MANAGEMENT:** *One of the key features of sustainable farming is the continuous integration of site specific knowledge and practical experiences into future management planning and practices. This section is intended to ensure that the land, buildings and other facilities, which constitute the fabric of the farm, are properly managed to ensure the safe production of food and protection of the environment.*		
AF . 2 . 1	**Site History**		
AF . 2 . 1 . 1	Is a recording system established for each unit of production or other area/ location to provide a permanent record of the livestock/aquaculture production and/or agronomic activities undertaken at those locations? Are these records kept in an ordered and up-to-date fashion?	Current records must provide a history of GlobalGAP (EurepGAP) production of all production areas. For Crops: New applicants must have full records for at least three months prior to the date of external inspection that reference each area covered by a crop with all the agronomic activities related to GlobalGAP (EurepGAP) documentation required of this area; and for Livestock and Aquaculture: these records must go back at least one rotation. No N/A	Major Must
AF . 2 . 1 . 2	Is a reference system for each field, orchard, greenhouse, yard, plot, livestock building or other area/location used in production established and referenced on a farm plan or map?	Compliance must include visual identification in the form of a physical sign at each field /greenhouse/plot/livestock building/pen or other farm, or a farm plan or map that could be cross referenced to the identification system. No N/A.	Minor Must

AF . 2 . 2	**Site Management**		
AF . 2 . 2 . 1	Is there a risk assessment for new agricultural sites (i.e. crop, livestock or aquaculture enterprises) or existing sites only where risks have changed, which shows the site in question to be suitable for production, with regards to food safety, operator health, the environment and animal health where applicable?	A documented risk assessment must be carried out when crops, livestock or aquaculture enterprises are to be introduced onto new sites. The risk assessment must be revised to take into account any new food safety risks. The risk assessment must take account site history (crops/stocking) and consider impact of proposed enterprises on adjacent stock/ crops/ environment (see AF Annex 1 Risk Assessment to determine when a risk assessment is needed). For Tea and Coffee certification, cross reference with TE.2.1.1 and CO.2.1.1, respectively	Major Must
AF . 2 . 2 . 2	Has a management plan been developed setting out strategies to minimise all identified risks, such as pollution or water table contamination? Are the results of this analysis recorded and used to justify that the site in question is suitable?	A management plan that has implemented strategies to meet the objectives of this specific control point has been developed.(This plan should include one or more of the following: habitat quality, soil compaction, soil erosion, emission of greenhouses gases where applicable, humus balance, phosphorus balance, nitrogen balance, intensity of chemical plant protection).	Minor Must
AF . 3	**WORKERS HEALTH, SAFETY AND WELFARE:** *People are key to the safe and efficient operation of any farm. Farm staff and contractors as well as producers themselves stand for the quality of the produce and for environmental protection. Education and training will help progress towards sustainability and build on social capital. This section is intended to ensure safe practice in the work place and that all workers understand, and are competent to perform their duties; are provided with proper equipment to allow them to work safely; and that, in the event of accidents, proper and timely assistance can be obtained.*		
AF . 3 . 1	**Risk Assessments**		
AF . 3 . 1 . 1	Does the farm have a written risk assessment for safe and healthy working conditions?	The written risk assessment can be a generic one but it must be appropriate for conditions on the farm. The risk assessment must be reviewed and updated when changes in the organisation (e.g. other activities) occur. No N/A.	Minor Must
AF . 3 . 1 . 2	Does the farm have a written health, safety and hygiene policy and procedures including issues of the risk assessment of AF.3.1.1?	The health, safety and hygiene policy must at least include the points identified in the risk assessment (AF.3.1.1). This could include accident and emergency procedures, hygiene procedures, dealing with any identified risks in the working situation, etc. The policy must be reviewed and updated when the risk assessment changes.	Minor Must
AF . 3 . 2	**Training**		
AF . 3 . 2 . 1	Is there a record kept for training activities and attendees?	A record is kept for training activities including the topic covered, the trainer, the date and attendees. Evidence of the attendance is required.	Minor Must

AF . 3 . 2 . 2	Do all workers handling and/or administering veterinary medicines, chemicals, disinfectants, plant protection products, biocides or other hazardous substances and all workers operating dangerous or complex equipment as defined in the risk assessment in AF.3.1.1 have certificates of competence, and/or details of other such qualifications?	Records must identify workers who carry out such tasks, and show certificates of training or proof of competence. No N/A	Major Must
AF . 3 . 2 . 3	Have all workers received adequate health and safety training and are they instructed according to the risk assessment in AF.3.1.1?	Workers can demonstrate competency in responsibilities and tasks through visual observation. If at time of inspection there are no activities, there must be evidence of instructions. No N/A.	Minor Must
AF . 3 . 2 . 4	Is there always an appropriate number of persons (at least one person) trained in first aid present on each farm whenever on-farm activities are being carried out?	There is always at least one person trained in First Aid (within the last 5 years) present on the farm whenever on-farm activities are being carried out. Applicable legislation on First Aid training must be followed where it exists. On-farm activities include all activities performed during all applicable chapters and modules.	Minor Must
AF . 3 . 2 . 5	Does the farm have documented hygiene instructions?	The hygiene instructions are visibly displayed: provided by way of clear signs (pictures) or in the predominant language(s) of the workforce. The instructions must at least include: - the need for hand cleaning; - the covering of skin cuts; - limitation on smoking, eating and drinking to certain areas; - notification of any relevant infections or conditions; - the use of suitable protective clothing.	Minor Must
AF . 3 . 2 . 6	Have all persons working on the farm received basic hygiene training according to the hygiene instructions in AF.3.2.5?	Both written and verbal training are given as an induction training course for hygiene. Training is provided by qualified people. All new workers must receive this training and confirm their participation with a signature. All instructions from AF.3.2.5 must be covered in this training. All workers, including the owners and managers, at any time of the year have been reviewed and signed for the farm's hygiene instructions.	Minor Must
AF . 3 . 2 . 7	Are the farm's hygiene procedures implemented?	Workers with tasks identified in the hygiene procedures must demonstrate competence during the inspection. No N/A	Minor Must
AF . 3 . 2 . 8	Are all subcontractors and visitors aware of the relevant procedures on personal safety and hygiene?	There is evidence that the relevant procedures on personal health, safety and hygiene are officially communicated to visitors and subcontractors (e.g. relevant instructions are in a visible place where all visitors or subcontractors can read them).	Minor Must

AF . 3 . 3	**Hazards and First Aid**		
AF . 3 . 3 . 1	Do accident and emergency procedures exist, are they visually displayed and communicated to all persons associated with the farm activities?	Permanent accident procedures must be clearly displayed in accessible, and visible location(s).These instructions are available in the predominant language(s) of the workforce and/or pictograms. The procedures must identify, if appropriate the following; E.g.: - farm's map reference or farm address - contact person(s) - location of the nearest means of communication (telephone, radio) - an up-to-date list of relevant phone numbers (police, ambulance, hospital, fire-brigade, access to emergency health care on site or by means of transport, electricity and water supplier); - how and where to contact the local medical services, Hospital and other emergency services. - location of fire extinguisher; - emergency exits; - emergency cut-offs for electricity, gas and water supplies. - how to report accidents or dangerous incidents.	Minor Must
AF . 3 . 3 . 2	Are potential hazards clearly identified by warning signs and placed where appropriate?	Permanent and legible signs must indicate potential hazards, e.g. waste pits, fuel tanks, workshops, access doors of the plant protection product / fertiliser / any other chemical storage facilities as well as the treated crop etc. Warning signs must be present. No N/A.	Minor Must
AF . 3 . 3 . 3	Is safety advice available /accessible for substances hazardous to worker health, when required?	Information (e.g. website, tel no, data sheets, etc.) is accessible, when required, to ensure appropriate action.	Minor Must
AF . 3 . 3 . 4	Are First Aid kits present at all permanent sites and in the vicinity of fieldwork?	Complete and maintained first aid kits according to national regulations and recommendations must be available and accessible at all permanent sites and available for transport to the vicinity of the work.	Minor Must
AF . 3 . 4	**Protective Clothing/Equipment**		
AF . 3 . 4 . 1	Are workers (including subcontractors) equipped with suitable protective clothing in accordance with legal requirements and/or label instructions or as authorised by a competent authority?	Complete sets of protective clothing, (e.g. rubber boots, waterproof clothing, protective overalls, rubber gloves, face masks, etc.) which enable label instructions and/or legal requirements and/or requirements as authorised by a competent authority to be complied with are available, used and in a good state of repair. This includes appropriate respiratory, ear and eye protection devices and life-jackets, where necessary.	Major Must

AF . 3 . 4 . 2	Is protective clothing cleaned after use and stored so as to prevent contamination of the clothing or equipment?	Protective clothing is regularly cleaned, according to a schedule adapted to the type of use and degree of soiling. Cleaning the protective clothing and equipment includes the separate washing from private clothing and glove washing before removal. Dirty, torn and damaged protective clothing and equipment and expired filter cartridges should be disposed of. Single-use items (e.g. gloves, overalls, etc.) have to be disposed of after one use. All the protective clothing and equipment including replacements filters etc., are stored apart and physically separate from the plant protection products/ any other chemicals which might cause contamination of the clothing or equipment in a well-ventilated area. No N/A.	Major Must
AF . 3 . 5	**Worker Welfare**		
AF . 3 . 5 . 1	Is a member of management clearly identifiable as responsible for workers health, safety and welfare?	Documentation is available that demonstrates that a clearly identified, named member of management has the responsibility for ensuring compliance with existing, current and relevant national and local regulations and the implementation of the policy on workers health safety and welfare.	Major Must
AF . 3 . 5 . 2	Do regular two way communication meetings take place between management and workers ? Are there records from such meetings?	Records show that the concerns of the workers about health, safety and welfare are being recorded in meetings planned and held at least once a year between management and workers at which matters related to the business and worker health, safety or welfare can be discussed openly (without fear of intimidation or retribution). The auditor is not required to make judgments about the content, accuracy or outcome of such meetings.	Recom.
AF . 3 . 5 . 3	Is there information available that provide an accurate overview over all workers of the farm?	Records demonstrate clearly an accurate overview over all workers (including seasonal workers) and subcontractors working on the farm. Information must be available of full names, date of entry, the period of employment and, the regular working time and overtime regulations. Records of all workers (also subcontractors) which provide the required information must be kept for the last 24 months from the date of first inspection. See AF.3.6.1 requirement for subcontractors.	Minor Must
AF . 3 . 5 . 4	Do workers have access to clean food storage areas, designated dining areas, hand washing facilities and drinking water?	A place to store food and to eat must be available. In addition, hand washing facilities and potable drinking water must be available to workers.	Minor Must

AF . 3 . 5 . 5	Are on site living quarters habitable and have the basic services and facilities?	The living quarters for the workers on farm are habitable, have a sound roof, windows and doors, and have the basic services of running water, toilets, drains. In case of no drains, septic pits can be accepted when proven to be hermetic.	Minor Must
AF . 3 . 6	**Subcontractors**		
AF . 3 . 6 . 1	When the producer makes use of subcontractors, is all the relevant information available on farm?	Subcontractors must carry out an assessment (or the producer must do it on behalf of the subcontractor) of compliance against the GlobalGAP (EurepGAP) control points relevant to the services provided on farm (including AF.3.5.3).This assessment must be available on farm during the external inspection and the subcontractor must accept that GlobalGAP (EurepGAP) approved certifiers are allowed to verify the assessments through a physical inspection where there is doubt. The producer is responsible for observance of the control points applicable to the tasks performed by the subcontractor by checking and signing the assessment of the subcontractor for each task and season contracted.	Minor Must
AF . 4	**WASTE AND POLLUTION MANAGEMENT, RECYCLING AND RE-USE:** *Waste minimisation should include: review of current practices, avoidance of waste, reduction of waste, re-use of waste, and recycling of waste.*		
AF . 4 . 1	**Identification of Waste and Pollutants**		
AF . 4 . 1 . 1	Have all possible waste products and sources of pollution been identified in all areas of the business?	All possible waste products (such as paper, cardboard, plastic, oil, etc) and sources of pollution (e.g. fertiliser excess, exhaust smoke, oil, fuel, noise, effluent, chemicals, sheep-dip, feed waste, dead or diseased fish, algae produced during net cleaning, etc) produced by the farm processes have been listed.	Minor Must
AF . 4 . 2	**Waste and Pollution Action Plan**		
AF . 4 . 2 . 1	Is there a documented farm waste management plan to avoid or reduce wastage and pollution and avoid the use of landfill or burning, by waste recycling? Are organic wastes composted on the farm and utilised for soil conditioning, provided there is no risk of disease carry-over?	A comprehensive, current, documented plan that covers wastage reduction, pollution and waste recycling is available. Air, soil, water, noise and light contamination must be considered.	Recom.
AF . 4 . 2 . 2	Has this waste management plan been implemented?	There are visible actions and measures on the farm that confirm that the objectives of the waste and pollution action plan are being carried out.	Recom.

AF . 4 . 2 . 3	Are the farm and premises clear of litter and waste to avoid establishing a breeding ground for pests and diseases which could result in a food safety risk?	Visual assessment that there is no evidence of breeding grounds in areas of waste/litter in the immediate vicinity of the production or storage buildings. Incidental and insignificant litter and waste on the designated areas are acceptable as well as the waste from the current day's work. All other litter and waste has been cleared up. Areas where produce is handled indoors are cleaned at least once a day.	Major Must
AF . 4 . 2 . 4	Do the premises have adequate provisions for waste disposal?	The farm has designated areas to store litter and waste. Different types of waste are identified and stored separately.	Recom.
AF . 5	**ENVIRONMENT AND CONSERVATION:** *Farming and environment are inseparably linked. Managing wildlife and landscape is of great importance; enhancement of species as well as structural diversity of land and landscape features will benefit the abundance and diversity of flora and fauna.*		
AF . 5 . 1	**Impact of Farming on the Environment and Biodiversity** (cross-reference with AB.7.5 Aquaculture Base for certification of Aquaculture sub-scopes)		
AF . 5 . 1 . 1	Does each producer have a management of wildlife and conservation plan for the enterprise that acknowledges the impact of farming activities on the environment?	There must be a written action plan which aims to enhance habitats and increase biodiversity on the farm. This can be either a regional activity or individual plan, if the farm is participating in or covered by it. This includes knowledge of IPM practices, of nutrient use of crops, conservation sites etc.	Minor Must
AF . 5 . 1 . 2	Has the producer considered how to enhance the environment for the benefit of the local community and flora and fauna?	There should be tangible actions and initiatives that can be demonstrated by the producer either on the production site or by participation in a group that is active in environmental support schemes looking at habitat quality and habitat elements.	Recom.
AF . 5 . 1 . 3	Is this policy compatible with sustainable commercial agricultural production and does it minimise environmental impact of the agricultural activity?	The contents and objectives of the conservation plan imply compatibility with sustainable agriculture and demonstrate a reduced environmental impact.	Recom.
AF . 5 . 1 . 4	Does the plan include a baseline audit to understand existing animal and plant diversity on the farm?	There is a commitment within the conservation plan to undertake a base line audit of the current levels, location, condition etc. of the fauna and flora on farm so as to enable actions to be planned. The effects of agricultural production on fauna and flora should be audited and serve as the basis for the action plan. Refer to points CO.10.1 for Coffee and TE.11.1 for Tea certification.	Recom.
AF . 5 . 1 . 5	Does the plan include action to avoid damage and deterioration of habitats on the farm?	Within the conservation plan there is a clear list of priorities and actions to rectify damaged or deteriorated habitats on the farm. Refer to points CO.10.1 for Coffee and TE.11.1 for Tea certification.	Recom.

AF . 5 . 1 . 6	Does the plan include activities to enhance habitats and increase biodiversity on the farm?	Within the conservation plan there is a clear list of priorities and actions to enhance habitats for fauna and flora where viable and increase biodiversity on the farm. Refer to points CO.10.1 for Coffee and TE.11.1 for Tea certification.	Recom.
AF . 5 . 2	**Unproductive Sites**		
AF . 5 . 2 . 1	Has consideration been given to the conversion of unproductive sites (e.g. low lying wet areas, woodlands, headland strip or areas of impoverished soil) to conservation areas for the encouragement of natural flora and fauna?	There should be a plan to convert unproductive sites and identified areas which give priority to ecology into conservation areas where viable.	Recom.
AF . 5 . 3	**Energy Efficiency**		
AF . 5 . 3 . 1	Can the producer show monitoring of energy use on the farm?	Energy use records exist. For example, farming equipment shall be selected and maintained for optimum consumption of energy. The use of non-renewable energy sources should be kept to a minimum. (Cross reference with CO.10.2 for Coffee and TE.11.2 for Tea certification).	Recom.
AF . 6	**COMPLAINTS:** *Management of complaints will lead to a better system and compliance with the GlobalGAP (EurepGAP) requirements.*		
AF . 6 . 1	Is there a complaint procedure available relating to issues covered by the GlobalGAP (EurepGAP) standard?	There must be available on request, a clearly identifiable document for complaints relating to issues covered by GlobalGAP (EurepGAP). No N/A.	Major Must
AF . 6 . 2	Does the complaints procedure ensure that complaints are adequately recorded, studied and followed up including a record of actions taken?	There are documents of the actions taken with respect to such complaints regarding GlobalGAP (EurepGAP) standard deficiencies found in products or services. No N/A.	Major Must
AF . 7	TRACEABILITY		
AF . 7 . 1	Do all producers have a documented recall procedure to manage the withdrawal of registered products from the market?	All producers must have access to documented procedures which identify the type of event that may result in a withdrawal, persons responsible for taking decisions on the possible withdrawal of product, the mechanism for notifying customers and the GlobalGAP (EurepGAP) CB (if a sanction was not issued by the CB and the producer or group recalled the products out of free will) and methods of reconciling stock. The procedures must be tested annually to ensure that it is sufficient.	Major Must
CROPS BASE			
CB	**CROPS BASE**		
CB . 1	**TRACEABILITY:** *Traceability facilitates the withdrawal of foods and enables customers to be provided with targeted and accurate information concerning implicated products.*		

CB . 1 . 1	Is GlobalGAP (EurepGAP) registered product traceable back to and traceable from the registered farm (and other relevant registered areas) where it has been grown?	There is a documented identification and traceability system that allows GlobalGAP (EurepGAP) registered product to be traced back to the registered farm or, in a Farmer Group, to the registered farms of the group, and tracked forward to the immediate customer. Harvest information must link a batch to the production records or the farms of specific producers. (Refer to General Regulations Part III for information on segregation in Option 2). Produce handling must also be covered if applicable. No N/A.	Major Must
CB . 2	**PROPAGATION MATERIAL:** *The choice of propagation material plays an important role in the production process and by using the correct varieties can help reduce the number of fertiliser and plant protection product applications. The choice of propagation material is a precondition of good plant growth and product quality.*		
CB . 2 . 1	**Quality and Health**		
CB . 2 . 1 . 1	Is there a document that guarantees seed quality (free from injurious pests, diseases, virus, etc.) ?	A record/certificate of the seed quality is kept and available and states variety purity, variety name, batch number and seed vendor.	Recom.
CB . 2 . 1 . 2	Are quality guarantees or certified production guarantees documented for purchased propagation material?	There are records to show that propagation material is complying with national legislation or in its absence, sector organisation guidelines and fit for purpose, i.e. quality certificate, terms of deliverance, signed letters or supplied by a nursery that has GlobalGAP (EurepGAP) or GlobalGAP (EurepGAP) recognised certification	Minor Must
CB . 2 . 1 . 3	Is purchased propagation material free of visible signs of pest and disease?	When plants have visible signs of pest and disease damage, a justification should be available (e.g. threshold for treatment).	Recom.
CB . 2 . 1 . 4	Are plant health quality control systems operational for in-house nursery propagation?	A quality control system that contains a monitoring system on visible signs of pest and diseases is in place and current records of the monitoring system must be available. Nursery means anywhere propagation material is produced, (including in-house grafting material selection). "Monitoring system" must include recording and identification of the mother plant or field of origin crop as applicable. Recording must be periodic at regular established intervals. If the cultivated trees or plants are intended for own use only (not sold), this will suffice. When rootstocks are used special attention has to be paid to the origin of the rootstocks through documentation.	Minor Must
CB . 2 . 2	**Pest and Disease Resistance**		
CB . 2 . 2 . 1	Does the producer consider pest and disease resistance /tolerance characteristics during variety selection?	The producer is able to demonstrate awareness of variety pest and disease resistance/tolerance when available and justify varietal selection.	Minor Must
CB . 2 . 3	**Chemical Treatments and Dressings**		

CB . 2 . 3 . 1	Is the use of seed/annual rootstocks treatments recorded?	When the seed or annual rootstock has been treated by the producer, there are records with the name of the product(s) used and its target(s) (pests and/or diseases). If the seed has been treated for preservation purposes by the supplier, evidence of the chemicals used must be kept (maintaining records/ seed packages, etc).	Minor Must
CB . 2 . 3 . 2	Are plant protection product treatments on in-house nursery propagation material applied during the plant propagation period recorded?	Records of plant protection product treatments applied during the plant propagation period for in-house plant nursery propagation are available and include requirements as set out in CB.8.2. No N/A	Minor Must
CB . 2 . 4	**Sowing/Planting**		
CB . 2 . 4 . 1	Does the producer keep records on sowing/planting methods, seed/planting rate, sowing/ planting date?	Records of sowing/planting method, rate and date must be kept and be available.	Minor Must
CB . 2 . 5	**Genetically Modified Organisms (N/A if no Genetically Modified varieties are used)**		
CB . 2 . 5 . 1	Does the planting of or trials with GMO's comply with all applicable legislation in the country of production?	The registered farm or group of registered farms have a copy of the legislation applicable in the country of production and comply accordingly. Records must be kept of the specific modification and/or the unique identifier. Specific husbandry and management advice must be obtained.	Major Must
CB . 2 . 5 . 2	Is there documentation available when the producer is growing genetically modified organisms?	If GMO cultivars and/or products derived from genetic modification are used, documented records of planting, use or production of GMO cultivars and/or products derived from genetic modification are available.	Minor Must
CB . 2 . 5 . 3	Did the producer inform their direct clients of the GMO status of the product?	Documented evidence of communication must be provided.	Major Must
CB . 2 . 5 . 4	Is there a plan for handling GM material (crops and trials) setting out strategies to minimise contamination risks, such as accidental mixing of adjacent non-GM crops and maintaining product integrity?	There must be a written plan that explains how GM material (crops and trials) are handled and stored to minimise risk of contamination with conventional material.	Minor Must
CB . 2 . 5 . 5	Are GMO crops stored separately from other crops to avoid adventitious mixing?	Visual assessment must be made of genetically modified (GMO) crops storage for integrity and identification.	Major Must
CB . 3 .	**SITE HISTORY AND SITE MANAGEMENT** Also see All Farm.2 (AF.2). Crop rotation is a basic strategy for control of pests, disease and weeds.		
CB . 3 . 1	**Rotations**		
CB . 3 . 1	Is there, where feasible, crop rotation for annual crops?	The rotations can be verified from planting date and/or plant protection product application records.	Recom.
CB . 4	**SOIL MANAGEMENT:** *Soil is the basis of all agricultural production, and the conservation and improvement of this valuable resource is essential. Good soil husbandry ensures long-term fertility of soil, aids yield and profitability.*		
CB . 4 . 1	**Soil Mapping**		

CB . 4 . 1 . 1	Have soil maps been prepared for the farm?	The type of soil is identified for each site, based on a soil profile or soil analysis or local (regional) cartographic soil-type map.	Recom.
CB . 4 . 2	**Cultivation**		
CB . 4 . 2 . 1	Have techniques been used that improve or maintain soil structure, and to avoid soil compaction?	Techniques applied are suitable for use on the land. There must be no evidence of soil compaction.	Recom
CB . 4 . 3	**Soil Erosion**		
CB . 4 . 3 . 1	Are field cultivation techniques used to reduce the possibility of soil erosion?	There is visual evidence that there is no soil erosion or evidence of practices such as mulching and/or cross line techniques on slopes and/or drains and/or sowing grass or green fertilisers, trees and bushes on borders of sites, etc.	Minor Must
CB . 5	**FERTILISER USE:** *The decision making process involves crop demands, the supply that is in the soil and available nutrients from farm manure and crop residues. Correct application to optimise use and storage procedures to avoid loss and contamination must be followed.*		
CB . 5 . 1	**Nutrient Requirement**		
CB . 5 . 1 . 1	Is the application of all fertilisers and manure timed to maximise the efficacy and/or uptake by target crops?	Producer must demonstrate that consideration has been given to nutritional needs of the crop, soil fertility and residual nutrients on the farm and records must be available as evidence. No N/A	Minor Must
CB . 5 . 2	**Advice on Quantity and Type of Fertiliser**		
CB . 5 . 2 . 1	Are recommendations for application of fertilisers (organic or inorganic) given by competent, qualified advisers holding a recognised national certificate or similar? Do producers who use outside professional help (advisers and consultants) regarding the use of fertilisers satisfy themselves that the people on whom they rely are competent to provide that advice?	Where the fertiliser records show that the technically responsible person making the choice of the fertiliser (organic or inorganic) is an external adviser, training and technical competence must be demonstrated via official qualifications, specific training courses, etc., unless employed for that purpose by a competent organisation (i.e. fertiliser company).	Minor Must
CB . 5 . 2 . 2	Where such advisers are not used, are producers able to demonstrate their competence and knowledge?	Where the fertiliser records show that the technically responsible person determining quantity and type of fertiliser (organic or inorganic) is the producer, experience must be complemented by technical knowledge (e.g. product technical literature, specific training course attendance, etc.) or the use of tools (software, on farm detection methods, etc.).	Minor Must
CB . 5 . 3	**Records of Application**		

CB . 5 . 3 . 1	Have all applications of soil and foliar fertilisers, both organic and inorganic, been recorded including field, orchard or greenhouse reference?	Records are kept of all fertiliser applications, detailing the geographical area, the name or reference of the field, orchard or greenhouse where the registered product crop is located. Also applicable for hydroponic situations and where fertigation is used. No N/A. Refer to TE.4.3.1 for Tea certification.	Minor Must
CB . 5 . 3 . 2	Have all application dates of soil and foliar fertilisers, both organic and inorganic, been recorded?	Detailed in the records of all fertiliser applications are the exact dates (day/ month /year) of the application. No N/A. Refer to TE.4.3.2 for Tea certification.	Minor Must
CB . 5 . 3 . 3	Have all applications of soil and foliar fertilisers, both organic and inorganic, been recorded including applied fertiliser types?	Detailed in the records of all fertiliser applications, the trade name, type of fertiliser (e.g. N, P, K) or concentrations (e.g. 17-17-17). No N/A.	Minor Must
CB . 5 . 3 . 4	Have all applied quantities of soil and foliar fertilisers, both organic and inorganic, been recorded?	Detailed in the records of all fertiliser application is the amount of product to be applied in weight or volume. The actual application made must be recorded as this is not necessarily the same as the recommendation. No N/A.	Minor Must
CB . 5 . 3 . 5	Have all applications of soil and foliar fertilisers, both organic and inorganic, been recorded including the method of application?	Detailed in the records of all fertiliser applications are the application machinery type used and the method (e.g. via the irrigation or mechanical distribution). No N/A.	Minor Must
CB . 5 . 3 . 6	Have all applications of soil and foliar fertilisers, both organic and inorganic, been recorded including the operator details?	Detailed in the records of all fertiliser applications is the name of the operator who has applied the fertiliser. If it is a one-man operation, (the producer) and the producer is the one doing the applications, it is acceptable to record the operator details only once No N/A. Refer to TE.4.3.3 for Tea certification.	Minor Must
CB . 5 . 4	**Application Machinery**		
CB . 5 . 4 . 1	Is fertiliser application machinery kept in good condition and verified annually to ensure accurate fertiliser application?	There are maintenance records (date and type of maintenance and calibration) or invoices of spare parts of both the organic and inorganic fertiliser application machinery available on request. There must, as a minimum, be documented records stating that the verification of calibration has been carried out by a specialised company, supplier of fertilization equipment or by the technically responsible person of the farm within the last 12 months.	Minor Must
CB . 5 . 5	**Fertiliser Storage**		
CB . 5 . 5 . 1	Is there an inorganic fertiliser stock inventory or record of use up to date and available on the farm?	A stock inventory which indicates the contents of the store (type and amount) is available and it is updated at least every 3 months.	Minor Must

CB . 5 . 5 . 2	Are inorganic fertilisers stored separately from plant protection products?	The minimum requirement is to prevent cross contamination between fertilisers and plant protection products by the use of a physical barrier. If fertilisers that are applied together with Plant Protection Products (i.e. micronutrients or foliar fertilisers) are packed in a sealed container it can be stored with plant protection products.	Minor Must
CB . 5 . 5 . 3	Are inorganic fertilisers stored in a covered area?	The covered area is suitable to protect all inorganic fertilisers, i.e. powders, granules or liquids, from atmospheric influences like sunlight, frost and rain. Based on risk assessment (fertiliser type, weather conditions, temporary storage), plastic coverage could be acceptable. Storage cannot be directly on the soil. It is allowed to store lime and gypsum in the field for a day or two before spreading	Minor Must
CB . 5 . 5 . 4	Are inorganic fertilisers stored in a clean area?	Inorganic fertilisers, i.e. powders, granules or liquids, are stored in an area that is free from waste, does not constitute a breeding place for rodents, and where spillage and leakage is cleared away.	Minor Must
CB . 5 . 5 . 5	Are inorganic fertilisers stored in a dry area?	The storage area for all inorganic fertilisers, i.e. powders, granules or liquids, is well ventilated and free from rainwater or heavy condensation. No storage directly on the soil.	Minor Must
CB . 5 . 5 . 6	Are inorganic fertilisers stored in an appropriate manner, which reduces the risk of contamination of water courses?	All inorganic fertilisers, i.e. powders, granules or liquids are stored in a manner which poses minimum risk of contamination to water sources, i.e. liquid fertiliser stores must be surrounded by an impermeable barrier (according to national and local legislation, or to contain a capacity to 110% of the volume of the largest container if there is no applicable legislation), and consideration has been given to the proximity to water courses and flood risks, etc. Refer to CO.4.1.1 for Coffee and TE.4.4.1 for Tea certifications.	Minor Must
CB . 5 . 5 . 7	Are organic fertilisers stored in an appropriate manner, which reduces the risk of contamination of the environment?	Organic fertilisers, stored on the farm, must be stored in a designated area. Appropriate measures have been taken to prevent contamination of surface water (such as concrete foundation and walls, or specially built leak proof container, etc.) or must be stored at least 25 m from surface water bodies in particular. Refer to CO.4.1.2 for Coffee and TE.4.4.2 for Tea certifications.	Minor Must
CB . 5 . 5 . 8	Are inorganic and organic fertilisers stored separate from fresh produce/tea/coffee cherries?	Fertilisers cannot be stored with fresh produce/tea and/or harvested coffee cherries.	Major Must
CB . 5 . 6	**Organic Fertiliser**		

CB . 5 . 6 . 1	Has the use of human sewage sludge been banned on the farm?	No human sewage sludge is used on the farm. No N/A.	Major Must
CB . 5 . 6 . 2	Has a risk assessment been carried out for organic fertiliser which considers its source and characteristics, before application?	Documentary evidence is available to demonstrate that the following potential risks have been considered: disease transmission, weed seed content, method of composting, heavy metal content, etc. This also applies to substrates from bio-gas plants in which case reference must additionally be made to the legal requirements in the risk assessment.	Minor Must
CB . 5 . 6 . 3	Has account been taken of the nutrient contribution of organic fertiliser applications?	An analysis is carried out, which takes into account the contents of N·P·K nutrients in organic fertiliser applied.	Recom.
CB . 5 . 7	**Inorganic Fertiliser**		
CB . 5 . 7 . 1	Are purchased inorganic fertilisers accompanied by documentary evidence of nutrient content (N,P,K)?	Documentary evidence detailing N, P, K content, is available for all inorganic fertilisers used on crops grown under GlobalGAP (EurepGAP) within the last 12-month period.	Minor Must
CB 5 . 7 . 2	Are purchased inorganic fertilisers accompanied by documentary evidence of chemical content, which includes heavy metals?	Documentary evidence detailing chemical content, including heavy metals, is available for all inorganic fertilisers used on crops grown under GlobalGAP (EurepGAP) within the last 12-month period.	Recom.
CB . 6	**IRRIGATION/FERTIGATION:** *Water is a scarce natural resource and irrigation should be triggered by appropriate forecasting and by technical equipment allowing for efficient use of irrigation water.*		
CB . 6 . 1	**Predicting Irrigation Requirements**		
CB . 6 . 1 1	Have systematic methods of prediction been used to calculate the water requirement of the crop?	Calculations are available and are supported by data records e.g. rain gauges, drainage trays for substrate, evaporation meters, water tension meters (% of moisture in the soil) and soil maps.	Recom.
CB . 6 . 2	**Irrigation/Fertigation Method**		
CB . 6 . 2 . 1	Can the producer justify the method of irrigation used in light of water conservation?	The idea is to avoid wasting water. The irrigation system used is the most efficient available for the crop and accepted as such within good agricultural practice.	Minor Must
CB . 6 . 2 . 2	Is there a water management plan to optimise water usage and reduce waste?	A documented plan is available which outlines the steps and actions to be taken to implement the management plan. Refer to CO.5.1.1 for Coffee and TE.5.1.1 for Tea certifications.	Recom.
CB . 6 . 2 3	Are records of irrigation/ fertigation water usage maintained?	Records are kept which indicate the date and volume per water meter or per irrigation unit. If the producer works with irrigation programmes, the calculated and actual irrigated water should be written down in the records. Refer to TE.5.1.2 for Tea certification.	Recom.
CB . 6 . 3	**Quality of Irrigation Water**		

CB . 6 . 3 . 1	Has the use of untreated sewage water for irrigation/fertigation been banned?	Untreated sewage water is not used for irrigation/fertigation. Where treated sewage water is used, water quality complies with the WHO published Guidelines for the Safe Use of Wastewater and Excreta in Agriculture and Aquaculture 1989. Also, when there is doubt if water is coming from a possibly polluted source (because of a village upstream, etc.) the grower has to demonstrate through analysis that the water complies with the WHO guideline requirements or the local legislation for irrigation water. See Table 3 in Annex AF.1 for Risk Assessments. No N/A.	Major Must
CB . 6 . 3 . 2	Has an annual risk assessment for irrigation/fertigation water pollution been completed?	The risk assessment must consider potential microbial, chemical or physical pollution of all sources of irrigation/fertigation water. Part of the risk assessment should consider the irrigation method and the crop, frequency of analysis, sources of water, the resources and susceptibility for pollutants and drain water of the sources and the environment.	Minor Must
CB . 6 . 3 . 3	Is irrigation water analysed at a frequency in line with the risk assessment (CB.6.3.2)?	The water analysis is carried out at a frequency according to the results of the risk assessment which takes the characteristics of the crop into account.	Minor Must
CB . 6 . 3 . 4	Is the analysis carried out by a suitable laboratory?	Results from appropriate laboratories, capable of performing microbiological analyses up to ISO 17025 level, or equivalent standard, should be available	Recom.
CB . 6 . 3 . 5	Have any adverse results been acted upon?	Records are available of what actions have been taken and what the results are so far.	Recom.
CB . 6 . 4	**Supply of irrigation/fertigation water**		
CB . 6 . 4 . 1	To protect the environment, is water abstracted from a sustainable source?	Sustainable sources are sources that supply enough water under normal (average) conditions.	Minor Must
CB . 6 . 4 . 2	Has advice on abstraction been sought from water authorities, where required by law?	Where required by law, there must be written communication from the local water authority on this subject (letter, license, etc.).	Minor Must
CB . 7	**INTEGRATED PEST MANAGEMENT:** *Integrated Pest Management (IPM) involves the careful consideration of all available pest control techniques and the subsequent integration of appropriate measures that discourage the development of pest populations, and keeps plant protection products and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment.*		
CB . 7 . 1	Has assistance with implementation of IPM systems been obtained through training or advice?	The technically responsible person on the farm has received formal documented training and / or the external technical IPM consultant can demonstrate their technical qualifications.	Minor Must
CB . 7 . 2	Can the producer show evidence of implementation of at least one activity that falls in the category of "Prevention"?	The producer can show evidence of implementing at least one activity that includes the adoption of cultivation methods that could reduce the incidence and intensity of pest attacks, thereby reducing the need for intervention. See Annex CB.1 - GlobalGAP (EurepGAP) IPM Guidelines.	Minor Must

CB . 7 . 3	Can the producer show evidence of implementation of at least one activity that falls in the category of "Observation and Monitoring"?	The producer can show evidence of implementing at least one activity that will determine when, and to what extent, pests and their natural enemies are present, and using this information to plan what pest management techniques are required. See CB Annex 1 – GlobalGAP (EurepGAP) IPM Guidelines.	Minor Must
CB . 7 . 4	Can the producer show evidence of implementation of at least one activity that falls in the category of "Intervention"?	The producer show evidence that in situations where pest attack adversely affects the economic value of a crop, intervention with specific pest control methods will take place. Where possible, non-chemical approaches must be considered. See CB Annex 1 – GlobalGAP (EurepGAP) IPM Guidelines.	Minor Must
CB . 7 . 5	Where plant protection products have been used, has protection been achieved with the appropriate minimum input? All plant protection product inputs are documented and include written justifications. No N/A.	All plant protection product inputs are documented and include written justifications. No N/A.	Minor Must
CB . 7 . 6	Have anti-resistance label recommendations been followed to maintain the effectiveness of available plant protection products?	When the level of a pest, disease or weed requires repeated controls in the crops, there is evidence that anti-resistance recommendations (where legal and effective alternatives are available) are followed if specified by the product label.	Minor Must
CB . 8	**PLANT PROTECTION PRODUCTS:** *In situations where pest attack will adversely affect the economic value of a crop, it may be necessary to intervene with specific pest control methods, including plant protection products (PPP). The correct use, handling and storage of plant protection products are essential.*		
CB . 8 . 1	**Choice of Plant Protection Products**		
CB . 8 . 1 . 1	Is the plant protection product applied appropriate for the target as recommended on the product label?	All the plant protection products applied to the crop are suitable and can be justified (according to label recommendations or official registration body publication) for the pest, disease, weed or target of the plant protection product intervention. Technically valid (legal) "off label" uses that are supported by the PPP industry in writing is allowable. If the producer uses off-label PPP there must be evidence of official approval for use of that PPP on that crop in that country. No N/A	Major Must

CB . 8 . 1 . 2	Do producers only use plant protection products that are registered in the country of use for the target crop where such official registration scheme exists?	All the plant protection products applied are officially registered or permitted by the appropriate governmental organisation in the country of application. Where no official registration scheme exists, refer to the GlobalGAP (EurepGAP) guideline (Annex CB.2) on this subject and FAO International Code of Conduct on the Distribution and Use of Pesticides. Refer also to Annex CB.2 for cases where producer takes part in legal field trials for final approval of PPP by the local Government. No N/A.	Major Must
CB . 8 . 1 . 3	Are invoices of registered plant protection products kept?	Invoices of the registered plant protection products used, must be kept for record keeping and available at the time of the external inspection. No N/A.	Minor Must
CB . 8 . 1 . 4	Is a current list kept of plant protection products that are used and approved for use on crops being grown?	An up to date documented list, that takes into account any changes in local and national plant protection product legislation is available for the commercial brand names of plant protection products (including their active ingredient composition, or beneficial organisms) that are used on crops being, or which have been, grown on the farm under GlobalGAP (EurepGAP) within the last 12 months. This is an internal management list, customised to the operation, not general information on approved products. No N/A.	Minor Must
CB . 8 . 1 . 5	Is there a process that prevents chemicals that are banned in the European Union from being used on crops destined for sale in the European Union?	The documented plant protection product application records confirm that no plant protection product that have been used within the last 12 months on the crops grown under GlobalGAP (EurepGAP) destined for sale within the E.U., has been prohibited by the E.U. (under EC Prohibition Directive List - 79/117/EC.)	Major Must
CB . 8 . 1 . 6	If the choice of plant protection products is made by advisers, can they demonstrate competence?	Where the plant protection product records show that the technically responsible person making the choice of the plant protection products is a qualified adviser, technical competence can be demonstrated via official qualifications or specific training course attendance certificates. Fax and emails from advisors, governments, etc. are allowable.	Major Must
CB . 8 . 1 . 7	If the choice of plant protection products is made by the producer, can competence and knowledge be demonstrated?	Where the plant protection product records show that the technically responsible person making the choice of plant protection products is the producer, experience must be complemented by technical knowledge that can be demonstrated via technical documentation, i.e. product technical literature, specific training course attendance, etc..	Major Must
CB . 8 . 2	**Records of Application**		

CB . 8 . 2 . 1	Have all the plant protection product applications been recorded including the crop name and/or variety?	All plant protection product application records specify the crop and/or variety treated. No N/A.	Major Must
CB . 8 . 2 . 2	Have all the plant protection product applications been recorded including the application location?	All plant protection product application records specify the geographical area, the name or reference of the farm, and the field, orchard or greenhouse where the crop is located. No N/A.	Major Must
CB . 8 . 2 . 3	Have all the plant protection product applications been recorded including application date?	All plant protection product application records specify the exact dates (day/month/year) of the application. Record the actual date (end date, if applied more than one day) of application. No N/A.	Major Must
CB . 8 . 2 . 4	Have all the plant protection product applications been recorded including the product trade name?	All plant protection product application records specify the trade name (including formulation) or beneficial organism. It must be possible to connect the trade name information to the active ingredient. No N/A.	Major Must
CB . 8 . 2 . 5	Has the operator been identified for plant protection product applications?	The operator applying plant protection products has been identified in the records. No N/A.	Minor Must
CB . 8 . 2 . 6	Have all the plant protection product applications been recorded including justification for application?	The common name of the pest(s), disease(s) or weed(s) treated is documented in all plant protection product application records. No N/A.	Minor Must
CB . 8 . 2 . 7	Have all the plant protection product applications been recorded including the technical authorisation for application?	The technically responsible person making the plant protection product recommendation has been identified in the records. No N/A.	Minor Must
CB . 8 . 2 . 8	Have all the plant protection product applications been recorded including appropriate information to identify the product quantity applied?	All plant protection product application records specify the amount of product to be applied in weight or volume, or the total quantity of water (or other carrier medium), and dosage in g/l or internationally recognised measures for the plant protection product. No N/A.	Minor Must
CB . 8 . 2 . 9	Have all the plant protection product applications been recorded including the application machinery used?	The application machinery type, for all the plant protection products applied (if there are various units, these are identified individually), and the method used (i.e. knapsack, high volume, U.L.V., via the irrigation system, dusting, fogger, aerial, or another method), are detailed in all plant protection product application records. No N/A.	Minor Must
CB . 8 . 2 . 10	Have all the plant protection product applications been recorded including the pre-harvest interval?	The pre-harvest interval has been recorded for all plant protection product applications. No N/A, unless Flower and Ornamental certification.	Major Must
CB . 8 . 3	**Pre-Harvest Interval (Not Applicable for Flower and Ornamentals)**		

CB . 8 . 3 . 1	Have the registered pre-harvest intervals been observed?	The producer can demonstrate that all pre-harvest intervals have been observed for plant protection products applied to the crops, through the use of clear documented procedures such as plant protection product application records and crop harvest dates from treated locations. Specifically in continuous harvesting situations, there are systems in place in the field, orchard or greenhouse, e.g. warning signs, time of application etc., to ensure compliance with all pre-harvest intervals. Refer to 8.6.4. No N/A, unless Flower and Ornamental production.	Major Must
CB . 8 . 4	**Application Equipment**		
CB . 8 . 4 . 1	Is plant protection product application machinery kept in good condition and verified annually to ensure accurate application?	The plant protection product application machinery is kept in a good state of repair with documented evidence of up to date maintenance sheets for all repairs, oil changes, etc. undertaken. See guideline (Annex CB.3) for compliance with visual inspection and functional tests of application equipment. The plant protection product application machinery (automatic and non-automatic) has been verified for correct operation within the last 12 months and this is certified or documented either by participation in an official scheme (where it exists) or by having been carried out by a person who can demonstrate their competence. No N/A.	Minor Must
CB . 8 . 4 . 2	Is the producer involved in an independent calibration-certification scheme, where available?	The producer's involvement in an independent calibration certification scheme is documented.	Recom.
CB . 8 . 4 . 3	When mixing plant protection products, are the correct handling and filling procedures, followed as stated on the label?	Facilities, including appropriate measuring equipment, must be adequate for mixing plant protection products, so that the correct handling and filling procedures, as stated on the label, can be followed. No N/A.	Minor Must
CB . 8 . 5	**Disposal of Surplus Application Mix**		
CB . 8 . 5 . 1	Is surplus application mix or tank washings disposed of according to national or local law, where it exists, or in its absence according to points CB.8.5.2 and CB.8.5.3, either of which in this case must be complied with in order to comply with this minor must?	Surplus mix or tank washings are disposed of according to the national or local legislation or, in its absence, according to points CB.8.5.2 and CB.8.5.3. No N/A.	Minor Must

CB . 8 . 5 . 2	Is surplus application mix or tank washings applied over an untreated part of the crop, as long as the recommended dose is not exceeded and records kept?	When surplus application mix or tank washings are applied over an untreated part of the crop, there is evidence that the recommended doses (as stated on the label) have not been exceeded and all the treatment have been recorded in the same manner and detail as a normal plant protection product application.	Recom.
CB . 8 . 5 . 3	Are surplus application mixes or tank washings applied onto designated fallow land, where legally allowed, and records kept?	When surplus application mix or tank washings are applied onto designated fallow land, it can be demonstrated that this is legal practice and all the treatments have been recorded in the same manner and detail as a normal plant protection product application, and avoiding risk of surface water contamination.	Recom
CB . 8 . 6	**Plant Protection Product Residue Analysis (N/A for Flower and Ornamental production)**		
CB . 8 . 6 . 1	Are the correct sampling procedures followed?	Documentary evidence exists demonstrating compliance with applicable sampling procedures. Sampling can be carried out by the laboratory or by the grower providing the procedure is adhered to. (Reference can also be made to 2002/63/EC - Community methods of sampling for the official control of pesticide residues in and on products of plant and animal origin for more information on sampling.)	Minor Must
CB . 8 . 6 . 2	If the producer or producer's customer able to provide current evidence either of annual (or more frequent) residue testing or of participation in a third party plant protection product residue monitoring system, which is traceable to the production location and that covers the plant protection products applied to the crop/product?	Current documented evidence or records are available either of annual plant protection product residue analysis results for the GlobalGAP (EurepGAP) registered product crops, or of participation in a third party plant protection product residue monitoring system which is traceable to the farm. Refer to Annex CB.4. No N/A.	Major Must
CB . 8 . 6 . 3	Is the producer (or the producer's customer) able to demonstrate information regarding the market where the producer is intending to trade produce, and the Maximum Residue Level (MRL) of that market?	The producer or the producer's customer must have available a list of current applicable MRLs for the market(s) where produce is intended to be traded in (whether domestic or international). The MRLs will be identified by either demonstrating communication with clients confirming the intended market(s), or by selecting the specific country(ies) (or group of countries) where produce is intending to be traded in, and presenting evidence of compliance with a residue screening system that meets the current applicable country(ies') MRLs. Where a group of countries is targeted together for trading in, the residue screening system must meet the strictest current applicable MRLs in the group. Refer to Annex CB.4.	Major Must

CB . 8 . 6 . 4	Has action been taken to meet the MRLs of the market the producer is intending to trade his produce in?	Where the MRLs of the market the producer is intending to trade his produce in are stricter than those of the country of production, the producer or the producer's customer can demonstrate that during the production cycle these MRLs have been taken into account (i.e. modification where necessary of plant protection product application regime and/or use of produce residue testing results). Refer to Annex CB.4.	Major Must
CB . 8 . 6 . 5	Is an action plan in place in the event of an MRL being exceeded, either of the country of production or of the countries where produce is intended to be traded in?	There is a clear documented procedure of the remedial steps and actions, (this will include communication to customers, product tracking exercise, etc.) to be taken where a plant protection product residue analysis indicates an MRL (either of the country of production or of the countries where his harvested product is intended to be traded in if different) is exceeded.	Major Must
CB . 8 . 6 . 6	Is the laboratory used for residue testing accredited by a competent national authority to ISO 17025 or equivalent standard?	There is clear documented evidence either on the letter headings or copies of accreditations etc. that the laboratories used for plant protection product residue analysis have been accredited, or are in the process of accreditation to the applicable scope by a competent national authority to ISO 17025 or an equivalent standard. In all cases the laboratories must show evidence of participation in proficiency tests, e.g. FAPAS must be available. Refer to Annex CB.4.	Minor Must
CB . 8 . 7	**Plant Protection Product Storage**		
CB . 8 . 7 . 1	Are plant protection products stored in accordance with local regulations?	The plant protection product storage facilities comply with all the appropriate current national, regional and local legislation and regulations.	Major Must
CB . 8 . 7 . 2	Are plant protection products stored in a location that is sound?	The plant protection product storage facilities are built in a manner which is structurally sound and robust. No N/A.	Minor Must
CB . 8 . 7 . 3	Are plant protection products stored in a location that is secure?	The plant protection product storage facilities are kept secure under lock and key. No N/A.	Major Must
CB . 8 . 7 . 4	Are plant protection products stored in a location that is appropriate to the temperature conditions?	The plant protection product storage facilities are built of materials or located so as to protect against temperature extremes. No N/A.	Minor Must
CB . 8 . 7 . 5	Are plant protection products stored in a location that is fire-resistant?	The plant protection product storage facilities are built of materials that are fire resistant (Minimum requirement RF 30, i.e. 30 minutes resistance to fire). No N/A.	Minor Must
CB . 8 . 7 . 6	Are plant protection products stored in a location that is well ventilated (in the case of walk-in storage)?	The plant protection product storage facilities have sufficient and constant ventilation of fresh air to avoid a build up of harmful vapours. No N/A.	Minor Must

CB . 8 . 7 . 7	Are plant protection products stored in a location that is well lit?	The plant protection product storage facilities have or are located in areas with sufficient illumination both by natural and by artificial lighting, to ensure that all product labels can be read easily on the shelves. No N/A.	Minor Must
CB . 8 . 7 . 8	Are plant protection products stored in a location that is located away from other materials?	The plant protection product storage facilities are located in a separate air space independent from any other materials. Refer to CB.5.5.2. No N/A.	Minor Must
CB . 8 . 7 . 9	Is all plant protection product storage shelving made of non-absorbent material?	The plant protection product storage facilities are equipped with shelving which is not absorbent in case of spillage, e.g. metal, rigid plastic.	Recom.
CB . 8 . 7 . 10	Is the plant protection product store able to retain spillage?	The plant protection product storage facilities have retaining tanks or are bunded according to 110% of the volume of the largest container of stored liquid, to ensure that there cannot be any leakage, seepage or contamination to the exterior of the store. No N/A.	Minor Must
CB . 8 . 7 . 11	Are there facilities for measuring and mixing plant protection products?	The plant protection product storage facilities or the plant protection product filling/mixing area if this is different, have measuring equipment whose graduation for containers and calibration verification for scales has been verified annually by the producer to assure accuracy of mixtures and are equipped with utensils, e.g. buckets, water supply point etc. for the safe and efficient handling of all plant protection products which can be applied. No N/A.	Minor Must
CB . 8 . 7 . 12	Are there facilities to deal with spillage?	The plant protection product storage facilities and all designated fixed filling/mixing areas are equipped with a container of absorbent inert material such as sand, floor brush and dustpan and plastic bags, that must be signposted and in a fixed location, to be used in case of spillage of plant protection product. No N/A.	Minor Must
CB . 8 . 7 . 13	Are keys and access to the plant protection product store limited to workers with formal training in the handling of plant protection products?	The plant protection product storage facilities are kept locked and physical access is only granted in the presence of persons who can demonstrate formal training in the safe handling and use of plant protection products. No N/A.	Minor Must
CB . 8 . 7 . 14	Is the product inventory documented and readily available?	A stock inventory which indicates the contents (type and quantity) of the store is available and it is updated at least every 3 months. Quantity refers to how many bags, bottles, etc., not on milligram or centiliter basis.	Minor Must
CB . 8 . 7 . 15	Are all plant protection products stored in their original package?	All the plant protection products that are currently in the store are kept in the original containers and packs, in the case of breakage only, the new package must contain all the information of the original label. Refer to CB.8.9.1. No N/A.	Major Must

CB . 8 . 7 . 16	Are those plant protection products that are approved for use on the crops grown in the crop rotation stored separately within the plant protection product store from those plant protection products used for other purposes?	All the plant protection products currently kept in the plant protection product store or which are indicated on the stock rotation records are officially approved and registered (point CB.8.1.3) for application on the crops within the crop rotation program. Plant protection products used for purposes other than application on crops within the rotation are clearly identified and stored separately within the GlobalGAP (EurepGAP) plant protection products store.	Minor Must
CB . 8 . 7 . 17	Are liquids not stored on shelves above powders?	All the plant protection products that are liquid formulations are stored on shelving which is never above those products that are powder or granular formulations. No N/A.	Minor Must
CB . 8 . 8	**Plant Protection Product Handling**		
CB . 8 . 8 . 1	Are all workers who have contact with plant protection products submitted voluntarily to annual health checks?	All workers who are in contact with plant protection products are voluntarily submitted to health checks annually. These Health checks must comply with national, regional or local codes of practice and use of results respect the legality of disclosure of personal data.	Recom.
CB . 8 . 8 . 2	Are there procedures dealing with re-entry times on the farm?	There are clear documented procedures which regulate all the re-entry intervals for plant protection products applied to the crops according to the label instructions. Where no re-entry information is available on the label, there are no specific requirements.	Major Must
CB . 8 . 8 . 3	Have the recommended re-entry times been monitored?	Documentation (e.g. plant protection products application records) demonstrate that all re-entry intervals for plant protection products applied to the crops have been monitored.	Minor Must
CB . 8 . 8 . 4	Is the accident procedure evident within 10 meters of the plant protection product/ chemical storage facilities?	An accident procedure containing all information detailed in AF.3.3.1 must visually display the basic steps of primary accident care and be accessible by all persons within 10 meters of the plant protection product/chemical storage facilities and designated mixing areas. No N/A	Minor Must
CB . 8 . 8 . 5	Are there facilities to deal with accidental operator contamination?	All plant protection product / chemical storage facilities and all filling/mixing areas present on the farm have eye wash capability, a source of clean water no more than 10 meters distant, a complete first aid kit and a clear accident procedure with emergency contact telephone numbers or basic steps of primary accident care, all permanently and clearly signed. No N/A.	Minor Must
CB . 8 . 9	**Empty Plant Protection Product Containers**		
CB . 8 . 9 . 1	Is re-use of empty plant protection product containers for purposes other than containing and transporting of the identical product avoided?	There is evidence that empty plant protection product containers have not been or currently are not being re-used for anything other than containing and transporting of the identical product as stated on the original label. No N/A.	Minor Must

CB . 8 . 9 . 2	Does disposal of empty plant protection product containers occur in a manner that avoids exposure to humans?	The system used to dispose of empty plant protection product containers ensures that persons cannot come into physical contact with the empty containers by having a secure storage point, safe handling system prior to the disposal and a disposal method that avoids exposure to persons. No N/A.	Minor Must
CB . 8 . 9 . 3	Does disposal of empty plant protection product containers occur in a manner that avoids contamination of the environment?	The system of disposal of empty plant protection product containers minimises the risk of contamination of the environment, watercourses and flora and fauna, by having a safe storage point and a handling system prior to disposal by an environmentally responsible method. No N/A.	Minor Must
CB . 8 . 9 . 4	Are official collection and disposal systems used when available?	Where official collection and disposal systems exist, there are documented records of participation by the producer.	Minor Must
CB . 8 . 9 . 5	If there is a collection system, are the empty containers adequately stored, labelled and handled according to the rules of a collection system?	All the empty plant protection product containers, once emptied, are not reused, and have been adequately stored, labelled and handled, according to the requirements of official collection and disposal schemes where applicable.	Minor Must
CB . 8 . 9 . 6	Are empty containers rinsed either via the use of an integrated pressure rinsing device on the application equipment, or at least three times with water?	Installed on the plant protection product application machinery there is pressure-rinsing equipment for plant protection product containers or there are clear written instructions to rinse each container 3 times prior to its disposal. No N/A.	Major Must
CB . 8 . 9 . 7	Is the rinsate from empty containers returned to the application equipment tank?	Either via the use of a container-handling device or via written procedure for the application equipment operators, the rinsate from the empty plant protection product containers is always put back into the application equipment tank when mixing.	Minor Must
CB . 8 . 9 . 8	Are empty containers kept secure until disposal is possible?	There is a designated secure store point for all empty plant protection product containers prior to disposal that is isolated from the crop and packaging materials i.e. permanently signed and with physically restricted access for persons and fauna.	Minor Must
CB . 8 . 9 . 9	Are all local regulations regarding disposal or destruction of containers observed?	All the relevant national, regional and local regulations and legislation if it exists, has been complied with regarding the disposal of empty plant protection product containers.	Major Must
CB . 8 . 10	**Obsolete plant protection products**		
CB . 8 . 10 . 1	Are obsolete plant protection products securely maintained and identified and disposed of by authorised or approved channels?	There are documented records that indicate that obsolete plant protection products have been disposed of by officially authorised channels. When this is not possible, obsolete plant protection products are securely maintained and identifiable.	Minor Must

FRUIT AND VEGETABLES			
FV . 1	**PROPAGATION MATERIAL**		
FV . 1 . 1	**Choice of variety or Rootstock**		
FV . 1 . 1 . 1	Is the producer aware of the importance of effective crop husbandry in relation to the "mother crops" (i.e. the seed producing crop) of the registered product crop?	Cropping techniques and measures are adopted in the "mother crops" which can minimise inputs such as plant protection products and fertilizers in the registered product crops	Recom.
FV . 2	**SOIL AND SUBSTRATE MANAGEMENT**		
FV . 2 . 1	**Soil Fumigation (N/A if no soil fumigation)**		
FV . 2 . 1 . 1	Is there a written justification for the use of soil fumigants?	There is written evidence and justification for the use of soil fumigants including location, date, active ingredient, doses, method of application and operator. The use of Methyl Bromide as soil fumigant is not permitted.	Minor Must
FV . 2 . 1 . 2	Is any pre-planting interval complied with?	Pre-planting interval must be recorded.	Minor Must
FV . 2 . 2	**Substrates (N/A if no substrates are used)**		
FV . 2 . 2 . 1	Does the producer participate in substrate recycling programmes for substrates where available?	The producer keeps records with quantities recycled and dates. Invoices/loading dockets are acceptable. If there is no participation in a recycling program available, it should be justified.	Recom.
FV . 2 . 2 . 2	If chemicals are used to sterilise substrates for reuse, have the location, the date of sterilisation, type of chemical, method of sterilisation, name of the operator and pre-planting interval been recorded?	When the substrates are sterilised on the farm, the name or reference of the field, orchard or greenhouse are recorded. If sterilised off farm then the name and location of the company which sterilises the substrate are recorded. The following are all correctly recorded: the dates of sterilisation (day/month/year); the name and active ingredient; the machinery (e.g. 1000 l-tank etc); the method (e.g. drenching, fogging); the operator's name (the person who actually applied the chemicals and did the sterilisation); and the pre-planting interval.	Major Must
FV . 2 . 2 . 3	For substrate of natural origin, can it be demonstrated that it does not come from designated conservation areas?	There are records that prove the origin of the substrates of natural origin being used. These records demonstrate that the substrates do not come from designated conservation areas.	Recom.
FV . 3	**IRRIGATION/FERTIGATION**		
FV . 3 . 1	**Quality of Irrigation Waste**		
FV . 3 . 1 . 1	According to the risk analysis (CB.6.3.2), does the analysis consider the microbial contaminants ?	According to the risk analysis (if there is a risk of microbial contaminants), there is a documented record of the relevant microbial contaminants through a laboratory analysis.	Minor Must
FV . 3 . 1 . 2	If the risk analysis so requires, have adverse results been acted upon?	Records are available of corrective actions or decisions taken.	Minor must
FV . 4	**HARVESTING**		
FV 4 . 1	**General**		

FV . 4 . 1 . 1	Has a hygiene risk analysis been performed for the harvest and pre-farm gate transport process?	There is a documented and up to date (reviewed annually) risk analysis covering physical, chemical and microbiological contaminants and human transmissable diseases, customised to the products. It must also include FV.4.1.2 to FV.4.1.9. The risk analysis shall be tailored to the scale of the farm, the crop, and the technical level of the business. No N/A.	Major Must
FV . 4 . 1 . 2	Are documented hygiene procedures for the harvesting process implemented ?	The farm manager or other nominated person is responsible for implementation of the hygiene procedures. No N/A.	Major Must
FV . 4 . 1 . 3	Have workers received basic instructions in hygiene before handling produce?	There must be evidence that the workers received training regarding personal cleanliness and clothing, e.g. hand washing, wearing of jewellery, fingernail length or cleaning, etc.; personal behaviour, e.g. no smoking, spitting, etc (reference AF.3.1.1).	Major Must
FV . 4 . 1 . 4	Are hygiene instructions and procedures for handling produce to avoid contamination of the product implemented?	There is evidence that the workers are complying with the hygiene instructions and procedures. Packers must be trained, using written (in appropriate languages) and/or pictorial instructions, to prevent physical (such as snails, stones, insects, knives, fruit residues, watches, mobile phones etc.), microbiological and chemical contamination of the product during packing.	Major Must
FV . 4 . 1 . 5	Are the containers and tools used for harvesting cleaned, maintained and protected from contamination?	Reusable harvesting containers, harvesting tools (i.e., scissors, knifes, pruning shears, etc.) and harvesting equipment (machinery) are cleaned and maintained, and a cleaning and disinfection schedule is in place (at least once a year) to prevent produce contamination?	Major Must
FV . 4 . 1 . 6	Are vehicles used for transport of harvested produce cleaned and maintained?	Farm vehicles used for transport of harvested produce that are also used for any purpose other than transport of harvested produce, are cleaned and maintained, and a cleaning schedule to prevent produce contamination is in place (i.e. soil, dirt, organic fertilizer, spills, etc.).	Major Must
FV . 4 . 1 . 7	Do harvest workers that come into direct contact with the crops have access to clean hand washing equipment?	Fixed or mobile hand washing equipment to clean and disinfect hands is accessible to harvest workers. No N/A.	Major Must
FV . 4 . 1 . 8	Do harvest workers have access to clean toilets in the vicinity of their work?	Fixed or mobile toilets (including pit latrines) constructed of materials that are easy to clean and with catch basins designed to prevent contamination in the field are accessible to harvest workers within 500m and they are in a good state of hygiene. Where an employee is working independently, the 500m distance can be modified to allow the presence of toilets at an increased distance, providing that there is reasonable and adequate transport available to the worker.	Minor Must

FV . 4 . 1 . 9	Are produce containers used exclusively for produce?	Produce containers are only used to contain harvested product (i.e. no agricultural chemicals, lubricants, oil, cleaning chemicals, plant or other debris, lunch bags, tools, etc.). If multi-purpose trailers, carts, etc. are used as produce containers, they must be cleaned prior to use.	Major Must
FV . 4 . 2	**Final Produce Packing at point of harvest (Applicable when during harvest, final packing and last human contact with product takes place in-field)**		
FV . 4 . 2 . 1	Does the harvesting process hygiene procedure consider handling of harvested produce and produce packed and handled directly in the field, orchard or greenhouse?	All produce packed and handled directly in the field, orchard or greenhouse must be removed from the field overnight, in accordance with the harvest hygiene risk assessment results. All field packed produce must be covered to prevent contamination once packed.	Major Must
FV . 4 . 2 . 2	Is a documented inspection process in place to ensure compliance with defined quality criteria?	An inspection process is in place to ensure products are packed according to documented quality criteria.	Minor Must
FV . 4 . 2 . 3	Are packed produce protected from contamination?	All field packed produce must be protected from contamination.	Major Must
FV . 4 . 2 . 4	Is any collection/ storage /distribution point of field packed produce maintained in clean and hygienic conditions?	If packed produce is stored on farm, storage areas must be cleaned.	Major Must
FV . 4 . 2 . 5	Is packing material used for in-field packing, stored to protect against contamination?	Packing material must be stored to protect it against contamination.	Major Must
FV . 4 . 2 . 6	Are bits of packaging material and other non-produce waste removed from the field?	Bits of packaging material and non-produce waste must be removed from the field.	Minor Must
FV . 4 . 2 . 7	If packed produce are stored on farm, are temperature and humidity controls (where applicable) maintained and documented?	Temperature and humidity controls (where applicable) must be maintained and documented, in accordance with the hygiene risk assessment results and quality requirements when packed produce are stored on farm.	Major Must
FV . 4 . 2 . 8	If ice or water is used in produce handling at point of harvest, is it made with potable water and handled under sanitary conditions to prevent produce contamination?	Any ice or water used at point of harvest should be made with potable water and handled under sanitary conditions to prevent produce contamination.	Minor Must
FV . 5	**PRODUCE HANDLING (N/A if Produce Handling in a packing facility on farm is excluded from certification; see General Regulations Part I, 4.9.6.3)**		
FV . 5 . 1	**Principles of Hygiene**		
FV . 5 . 1 . 1	Has a hygiene risk analysis and risk assessment been performed for the harvested crop handling process that covers the hygiene aspects of the produce handling operation?	There is a documented and up to date (reviewed annually) risk analysis of the possible risks, and an assessment of the likelihood and severity of the risks covering physical, chemical and microbiological contaminants and human transmissable diseases, customised to the products and operation of the packhouse.	Major Must

FV . 5 . 1 . 2	Are documented hygiene procedures implemented for the process of harvested crop handling?	The farm manager or other nominated person is responsible for implementation of the hygiene procedures as a direct result of the produce handling hygiene risk analysis.	Minor Must
FV . 5 . 2	**Personal Hygiene**		
FV . 5 . 2 . 1	Have workers received basic instructions in hygiene before handling produce?	There must be evidence that the workers received training regarding transmission of communicable diseases, personal cleanliness and clothing, i.e. hand washing, wearing of jewellery and fingernail length and cleaning, etc.; personal behaviour, i.e. no smoking, spitting, eating, chewing, perfumes, etc.	Major Must
FV . 5 . 2 . 2	Do the workers implement the hygiene instructions for handling produce?	There is evidence that the workers are complying with the hygiene instructions. Unless exclusion from Produce Handling declaration exists for each registered product, no N/A.	Minor Must
FV . 5 . 2 . 3	Are all workers wearing outer garments that are clean and fit for purpose for the operation and able to protect products from contamination?	All workers wear outer garments (e.g. smocks, aprons, sleeves, gloves) that are clean and fit for purpose for the operation according to the risk analysis. This will depend on the product and operation.	Recom.
FV . 5 . 2 . 4	Are smoking, eating, chewing and drinking confined to designated areas segregated from products?	Smoking, eating, chewing and drinking are confined to designated areas and are never allowed in the produce handling or storage areas. (Drinking water is the exception).	Minor Must
FV . 5 . 2 . 5	Are signs clearly displayed in the packing facilities with the main hygiene instructions for workers and visitors?	Signs with the main hygiene instructions must be visibly displayed in the packing facility.	Minor Must
FV . 5 . 3	**Sanitary Facilities**		
FV . 5 . 3 . 1	Do workers in the packing facility have access to clean toilets and hand washing facilities in the vicinity of their work?	Toilets in a good state of hygiene must not open directly onto the produce handling area, unless the door is self-closing. Hand washing facilities, containing non-perfumed soap, water to clean and disinfect hands, and hand dry facilities must be accessible and near to the toilets (as near as possible without the potential for cross-contamination).	Major Must
FV . 5 . 3 . 2	Are signs clearly displayed instructing workers to wash their hands before returning to work?	Signs must be visible with clear instructions that hands must be washed before handling products, especially after using toilets, eating, etc.	Major Must
FV . 5 . 3 . 3	Are there suitable changing facilities for the workers?	The changing facilities should be used to change clothing and protective outer garments as required.	Recom.
FV . 5 . 3 . 4	Are there lockable storage facilities for the workers?	Secure storage facilities should be provided at the changing facility to protect the workers' personal belongings.	Recom.
FV . 5 . 4	**Packing and Storage areas**		

FV . 5 . 4 . 1	Are produce handling and storage facilities and equipment cleaned and maintained so as to prevent contamination?	To prevent contamination, produce handling and storage facilities and equipment (i.e. process lines and machinery, walls, floors, storage areas, pallets, etc.) must be cleaned and/or maintained according to the cleaning and maintenance schedule, with defined minimum frequency. Documented records of cleaning and maintenance must be kept.	Minor Must
FV . 5 . 4 . 2	Are cleaning agents, lubricants, etc. stored to prevent chemical contamination of produce?	Cleaning agents, lubricants etc. are kept in a designated area, away from where produce is packed, to avoid chemical contamination of produce.	Minor Must
FV . 5 . 4 . 3	Are cleaning agents, lubricants etc. that may come into contact with produce, approved for application in the food industry? Are dose rates followed correctly?	Documentary evidence exists (i.e. specific label mention or technical data sheet) authorising use for the food industry of cleaning agents, lubricants etc. which may come into contact with produce.	Minor Must
FV . 5 . 4 . 4	Are all forklifts and other driven transport trolleys clean and well maintained and of suitable type to avoid contamination through emissions?	Internal transport should be maintained to avoid product contamination, with special attention to fume emissions. Forklifts and other driven transport trolleys should be electric or gas-driven.	Recom.
FV . 5 . 4 . 5	Is rejected produce and waste material in the packing environment stored in designated areas, which are routinely cleaned and/or disinfected ?	Rejected produce and waste materials are stored in clearly designated and segregated areas designed to avoid contamination of products. These areas are routinely cleaned and/or disinfected according to the cleaning schedule.	Minor Must
FV . 5 . 4 . 6	Are breakage safe lamps or lamps with a protective cap used above the sorting, weighing and storage area?	Light bulbs and fixtures suspended above produce or material used for produce handling are of a safety type or are protected/shielded so as to prevent contamination of food in case of breakage.	Major Must
FV . 5 . 4 . 7	Are there written glass and clear hard plastic handling procedures in place?	Written procedures exist for handling glass or clear hard plastic breakages in produce handling, preparation and storage areas.	Minor Must
FV . 5 . 4 . 8	Are packing materials clean and stored in clean and hygienic conditions?	Packing materials (including re-useable crates) are stored in a clean and hygienic area, to prevent product contamination until used.	Minor Must
FV . 5 . 4 . 9	Is access of animals to the facilities restricted?	Measures are in place to prevent access by animals.	Minor Must
FV . 5 . 5	**Quality Control**		
FV . 5 . 5 . 1	Is a documented inspection process in place to ensure compliance with a defined quality standard?	An inspection process is in place to ensure products are packed according to documented quality standards.	Minor Must
FV . 5 . 5 . 2	Are temperature and humidity (where applicable) controls maintained and documented where produce are packed and/or stored on farm?	If packed produce are stored on farm, temperature and humidity controls (where applicable and also for controlled atmosphere storage) must be maintained and documented in accordance with the hygiene risk assessment results.	Major Must

FV . 5 . 5 . 3	For products that are sensitive to light (e.g. potatoes), is daylight ingress controlled in longer term storage facilities?	Check for no daylight ingress	Major Must
FV . 5 . 5 . 4	Is stock rotation being managed?	Stock rotation must be managed to ensure maximum product quality and safety.	Recom.
FV . 5 . 5 . 5	Is there a process for verifying measuring and temperature control equipment?	Equipment used for weighing and temperature control, must be routinely verified to see if equipment is calibrated according to a risk analysis.	Minor Must
FV . 5 . 6	**Rodent and Bird Control**		
FV . 5 . 6 . 1	Are all entry points to buildings or equipment that may come into contact with them suitably protected to prevent, whenever practically possible, the ingress of rodents and birds?	Visual assessment. No N/A	Minor Must
FV . 5 . 6 . 2	Are there site plans with bait points and/or traps?	Site plan showing bait points must exist. No N/A.	Minor Must
FV . 5 . 6 . 3	Are baits placed in such a manner that non-target species do not have access?	Visual observation. Non-targeted species must not have access to the bait. No N/A.	Minor Must
FV . 5 . 6 . 4	Are detailed records of pest control inspections and necessary actions taken, kept?	Records of pest control inspections and follow up action plan(s). The producer can have his own records. Inspections must take place whenever there is evidence of presence of pests. In case of vermin, the producer must have a contact number of the pest controller or evidence of in-house capability to control pests.	Minor Must
FV . 5 . 7	**Post-Harvest Washing (N/A when no post-harvest washing)**		
FV . 5 . 7 . 1	Is the source of water used for final product washing potable or declared suitable by the competent authorities?	The water has been declared suitable by the competent authorities and/or within the last 12 months a water analysis has been carried out at the point of entry into the washing machinery. The levels of the parameters analysed are within accepted WHO thresholds or are accepted as safe for the food industry by the competent authorities.	Major Must
FV . 5 . 7 . 2	If water is re-circulated for final product washing, has this water been filtered and are pH, concentration and exposure levels to disinfectant routinely monitored?	Where water is re-circulated for final produce washing, it is filtered and disinfected, and pH, concentration and exposure levels to disinfectant are routinely monitored, with documented records maintained. Filtering must be done with an effective system for solids and suspensions that have a documented routine cleaning schedule according to the usage and water volume.	Major Must
FV . 5 . 7 . 3	Is the laboratory carrying out the water analysis a suitable one?	The water analysis for the product washing is undertaken by a laboratory currently accredited to ISO 17025 or its national equivalent or that can demonstrate via documentation that it is in the process of gaining accreditation.	Recom.
FV . 5 . 8	**Post-Harvest Treatments (N/A when no post-harvest treatments)**		

FV . 5 . 8 . 1	Are all label instructions observed?	There are clear procedures and documentation available, e.g. application records for post-harvest biocides, waxes and plant protection products, which demonstrate that the label instructions for chemicals applied are compliant.	Major Must
FV . 5 . 8 . 2	Are all the biocides, waxes and plant protection products used for post harvest protection of the harvested crop officially registered in the country of use?	All the post harvest biocides, waxes and plant protection products used on harvested crop are officially registered or permitted by the appropriate governmental organisation in the country of application. They are approved for use in the country of application and are approved for use on the harvested crop to which it is applied as indicated on the biocides, waxes and crop protection products' labels. Where no official registration scheme exists, refer to the GlobalGAP (EurepGAP) guideline (CB Annex 2 PPP) on this subject and FAO International Code of Conduct on the Distribution and Use of Pesticides.	Major Must
FV . 5 . 8 . 3	Are only any biocides, waxes and plant protection products used on harvested crop destined for sale in the European Union that are not banned in the European Union?	The documented post harvest biocide, wax and crop protection product application records confirm that no biocides, waxes and crop protection products that have been used within the last 12 months on the harvested crop grown under GlobalGAP (EurepGAP) destined for sale within the E.U., have been prohibited by the E.U. (under EC Prohibition Directive List - 79/117/EC.)	Major Must
FV . 5 . 8 . 4	Is an up-to-date list maintained of post-harvest plant protection products that are used, and approved for use, on crops being grown?	An up to date documented list, that takes into account any changes in local and national legislation for biocides, waxes and plant protection products is available for the commercial brand names (including any active ingredient composition) that are used as post-harvest protection being, or which have been, grown on the farm under GlobalGAP (EurepGAP) within the last 12 months. No N/A.	Minor Must
FV . 5 . 8 . 5	Is the technically responsible person for the harvested crop handling process able to demonstrate competence and knowledge with regard to the application of biocides, waxes and plant protection products?	The technically responsible person for the post harvest biocides, waxes and plant protection products applications can demonstrate sufficient level of technical competence via nationally recognised certificates or formal training.	Major Must
FV . 5 . 8 . 6	Have the post-harvest biocides, waxes and plant protection product applications, including the harvested crops' identity (i.e. lot or batch of produce), been recorded ?	The lot or batch of harvested crop treated is documented in all post harvest biocide, wax and plant protection product application records	Major Must

FV . 5 . 8 . 7	Has the location of the post-harvest biocides, waxes and plant protection products applications been recorded?	The geographical area, the name or reference of the farm or harvested crop handling site where the treatment was undertaken is documented in all post-harvest biocide, wax and plant protection product application records.	Major Must
FV . 5 . 8 . 8	Have the application dates of the post-harvest biocide, wax and plant protection product been recorded?	The exact dates (day/month/year) of the applications are documented in all post-harvest biocide, wax and plant protection product application records.	Major Must
FV . 5 . 8 . 9	Has the type of treatment been recorded for the post-harvest biocide, wax and plant protection product applications?	The type of treatment used for product application (i.e. spraying, drenching, gassing etc.) is documented in all post-harvest biocide, wax and plant protection product application records.	Major Must
FV . 5 . 8 . 10	Has the product trade name of the post-harvest biocide, wax and plant protection product applications been recorded?	The trade name of the products applied are documented in all post harvest biocide, wax and plant protection product application records.	Major Must
FV . 5 . 8 . 11	Has the product quantity applied of the post-harvest biocide, waxes and plant protection product applications been recorded?	The amount of product applied in weight or volume per litre of water or other carrier medium is recorded in all post-harvest biocide, wax and plant protection product applications records.	Major Must
FV . 5 . 8 . 12	Has the name of the operator of the post-harvest biocide, wax and plant protection product applications been recorded?	The name of the operator who has applied the plant protection product to the harvested crop is documented in all post-harvest biocide, wax and plant protection product application records.	Minor Must
FV . 5 . 8 . 13	Has the justification for application for the post-harvest biocide, wax and plant protection product applications been recorded?	The common name of the pest, disease to be treated is documented in all post-harvest biocide, wax and plant protection product application records.	Minor Must
FV . 5 . 8 . 14	Are all of the post-harvest plant protection product applications also considered under points CB.8.6 of this document?	There is documentary evidence to demonstrate that the producer considers all post-harvest biocides and plant protection products applications under Control Points CB.8.6, and acts accordingly.	Major Must

Appendix B

Certification Options (Producer Group Certification)

Source: Eurep, 2007c

What is a producer group?

A producer group is a group of producers (with their respective production locations) seeking to be GlobalGAP (EurepGAP) certified. The structure of the producer group must enable the application of a Quality Management System across the whole group. The Quality Management System (QMS) in place must be sufficiently robust to ensure (and to demonstrate through audits) that the group's registered producer members/production locations comply in a uniform manner with the GlobalGAP (EurepGAP) standard requirements. The producer group registered members must be legally responsible for their respective production locations. The producer group must comply with the requirements set out in this document to qualify for Option 2 certification.

A producer group is not a multi-site operation where an individual or one organisation owns several production locations or "farms", which in itself are NOT separate legal entities. This type of operation falls under Option 1 and every production location, farm or site must be inspected and covered under the scope of the certificate. Only if such an operation has a Quality Management System including internal annual inspections, and the QMS is included in the GlobalGAP (EurepGAP) certification, can it be certified as Option 1, while following the Option 2 rules for random external sampling of sites (minimum square root) based on the criteria as described in GR Part I, 5.2 Option 2 and Part II, Appendix II.3 Rules for Evaluating Option 2 Producer Groups, 6.1.2.

NOTE: The entire crop of a registered product must be certified. e.g. A GlobalGAP (EurepGAP) producer that is part of a producer group certified for strawberries, must include all the production locations with strawberries for certification. See Annex III.1 (Producer Group and Legal Entity) for further clarification of the legal entity.

Administration and Structure

Legality

There shall be documentation, which clearly demonstrates that the applicant producer group is or belongs to a legal entity. The legal entity must have been granted the legal right to carry out agricultural production and/or trading, and be able to legally contract with and represent the

group members. The group or legal entity must, as a group, be registered legally for example as a Cooperative, Producers Association, Packing Company, Trading Company, Farming Company, etc. (not consultancy companies, Non-Governmental Organisations, development agencies, agrochemicals distributor, etc). This legal entity must have ultimate responsibility over the production, handling and ownership of the products, thus it is responsible for the compliance with the GlobalGAP (EurepGAP) standard and General Regulations within the GlobalGAP (EurepGAP) producer group. The legal entity will enter into a contractual relationship with GlobalGAP (EurepGAP) through the signature of the GlobalGAP (EurepGAP) Sub-Licence and Certification Agreement with a GlobalGAP (EurepGAP) approved CB, and becomes the sole holder of the GlobalGAP (EurepGAP) certificate.

Structure

The administrative structure of the producer group shall be documented and clearly identify the relationship between the producers and the legal entity.

Contractual Documentation

There shall be written signed contracts between each producer and the legal entity. The contracts shall include the following elements:

(i) Name or fiscal identification of the producer

(ii) Contact address

(iii) Details of the individual production locations

(iv) Commitment to comply with the requirements of the GlobalGAP (EurepGAP) standard

(v) Agreement to comply with the group's documented procedures, policies and where provided, technical advice.

(vi) Sanctions that may be applied in case of GlobalGAP (EurepGAP) and any other internal requirements not being met.

Producer Register

A register shall be maintained of all GlobalGAP (EurepGAP) member producers, and of all the applicable sites used for production in accordance with the GlobalGAP (EurepGAP) standard. All these member producers in the producer register must be registered individually on the GlobalGAP (EurepGAP) database according to the requirements of the General Regulations

PART I; 4.8 Registration. The register shall at least contain the following information for each producer:

(i) Name of producer

(ii) Name of contact person

(iii) Full address (physical and postal)

(iv) Contact data (telephone number and e-mail and/or fax number)

(v) Other ID (VAT Number, ILN, UAID, etc) if required for the country of production

(vi) Product registered

(vii) Growing/Production area and/or quantity for each registered product

(viii) Certification Body(ies) if a producer makes use of more than 1 CB (according to General Regulations PART I; 4.4.1.vi and 4.4.2.vi)

(ix) Internal audit date

(x) Current GlobalGAP (EurepGAP) status (according to the statuses as indicated in Annex I.4)

NOTE: Those producers of the legal entity who do not apply for GlobalGAP (EurepGAP) certification must be listed separately and will not be registered in the GlobalGAP(EurepGAP) database (unless they have applied for option 3 or 4). This list is for management purposes within the producer group, and the disclosure of its contents externally is not required, unless it is needed for clarification of any issues raised for example on the effectiveness of the producer group's Quality Management System. All data protection rules shall be published and observed.

Management and Organisation

Structure

The producer group shall have a management structure and sufficient suitably trained resources to effectively ensure that the registered producers meet the requirements of GlobalGAP (EurepGAP) on their production locations. The organisational structure of the group shall be documented and shall include:

(i) GlobalGAP (EurepGAP) management representative - person or department responsible for managing the implementation of GlobalGAP (EurepGAP) in the group.

(ii) Internal inspector(s) – person(s) responsible for the internal inspections of each producer member of the group annually; complying with the GlobalGAP (EurepGAP) requirements set for an internal group inspector (Appendix III.1).

(iii) Internal auditor(s) – person(s) responsible for the internal audit of the Quality Management System, complying with the GlobalGAP (EurepGAP) requirements set for an internal group auditor (Appendix III.2).

(iv) Agricultural or livestock technical person/department – person(s) responsible for technical advice to the group.

(v) Quality Systems Management (QMS) person/department – person(s) responsible for managing the QMS.

NOTE: A group needs at least one internal auditor, who can cover the functions of internal group inspector and internal auditor (in case only one internal auditor who performs also the inspections, another person, identified in the QMS must approve the producer internal inspections; see Appendix III.2, 3.1.i and 3.4.2)

Responsibility and Duties

The duties and responsibilities of all personnel involved with the compliance of GlobalGAP (EurepGAP) requirements shall be documented, and an individual who holds a position of sufficient seniority and resources to serve as the overall responsible person will be nominated for maintenance of the GlobalGAP (EurepGAP) certification (see 1.2.1.i).

Competency and Training of Staff

(i) The group shall ensure that all personnel with responsibility for compliance with the GlobalGAP (EurepGAP) standard are adequately trained and meet defined competency requirements.
(ii) The competency requirements, training and qualifications for key staff shall be documented and shall meet any defined competency requirements laid out in the GlobalGAP (EurepGAP) standard.
(iii) Records of qualifications and training shall be maintained for all key staff (managers, auditors, inspectors, etc.) involved in compliance with GlobalGAP (EurepGAP) requirements to demonstrate competence.

(iv) The internal auditor(s) and inspector(s) shall undergo training and evaluation, e.g. by documented shadow audits, to ensure consistency in their approach and interpretation of the standard.

(v) Systems shall be in place to demonstrate that key staff is informed and aware of development, issues and legislative changes relevant to the compliance to the GlobalGAP (EurepGAP) standard.

Quality Manual

(i) The operating and quality management systems related to the GlobalGAP (EurepGAP) standard shall be documented and contained in a Quality Manual(s).

(ii) Policies and procedures shall be sufficiently detailed to demonstrate the group's control of the principal requirements of the GlobalGAP (EurepGAP) standard.

(iii) Relevant procedures and policies shall be available to the producer group registered members and key staff.

(iv) The contents of the Quality Manual shall be reviewed periodically to ensure that it continues to meet the requirements of the GlobalGAP (EurepGAP) standard and those of the producer group. Any relevant modifications of the GlobalGAP (EurepGAP) standard or published guidelines that come into force must be incorporated into the Quality Manual within the time period given by GlobalGAP (EurepGAP).

Document Control

Quality Management System (QMS) Documents

All documentation relevant to the operation of the Quality Management System (QMS) for GlobalGAP (EurepGAP) compliance shall be adequately controlled. This documentation shall include:

- The Quality Manual
- GlobalGAP (EurepGAP) operating procedures
- Work instructions
- Recording forms
- Relevant external standards, e.g. the current GlobalGAP (EurepGAP) normative documents.

Quality Management System Document Control Requirements

(i) There shall be a written procedure defining the control of documents.
(ii) All documentation shall be reviewed and approved by authorised personnel before issue and distribution.
(iii) All controlled documents shall be identified with an issue number, issue date/ review date and be appropriately paged
(iv) Any change in these documents shall be reviewed and approved by authorised personnel prior to its distribution. Wherever possible an explanation of the reason and nature of the changes should be identified.
(v) A copy of all relevant documentation shall be available at any place where the QMS is being controlled.
(vi) There shall be a system in place to ensure that documentation is reviewed and that following the issue of new documents, obsolete documents are effectively rescinded.

Records

(i) The group shall maintain records to demonstrate effective control of the GlobalGAP (EurepGAP) Quality Management System requirements and compliance with the requirements of GlobalGAP (EurepGAP) standard.
(ii) Records from the QMS related to compliance of GlobalGAP (EurepGAP) requirements shall be kept for a minimum of 2 years.
(iii) Records shall be genuine, legible, stored and maintained in suitable conditions and shall be accessible for inspection as required.
(iv) Records that are kept on-line or electronically are valid. If a signature is required, this can be a password or electronic signature that ensures the unique reference and authorization of the person signing. If a written signature of the responsible person is needed then this must be present. The electronic records must be available during the CB inspections. Back-ups must be available at all times.

Complaint Handling

(i) The group shall have a system for effectively managing customer complaints.
(ii) There shall be a documented procedure that describes how complaints are received, registered, identified, investigated, followed up and reviewed.
(iii) The procedure shall be available to customers as required.
(iv) The procedure shall cover both complaints to the group and against individual producers.

Internal Audits and Inspections

Internal audit systems shall be in place both to assess the adequacy and compliance of the documented QMS and to inspect the producers and farms against the GlobalGAP (EurepGAP) standard.

Quality Management System Audit

Internal auditor(s), complying with the GlobalGAP (EurepGAP) requirements set for an internal group auditor (Appendix III.2), will do the internal audit of the QMS.

(i) The QMS for the GlobalGAP (EurepGAP) scheme shall be audited at least annually.
(ii) Internal auditors shall be suitably trained and independent of the area being audited.
(iii) The CB will evaluate the competence of the internal auditor during the external audit by checking compliance with Appendix III.2.
(iv) Records of the internal audit plan, audit findings and follow up of corrective actions resulting from an audit shall be maintained and available.

NOTE: It is permitted for the same person to initially develop the QMS within the group, and then undertake the required annual QMS audit, however the person responsible for the day-today ongoing management of the QMS is not allowed to undertake the required subsequent annual internal QMS audits (see Appendix III.2, 3.4.3).

Producer and Production Location Inspections

Internal inspectors, complying with the GlobalGAP (EurepGAP) requirements set for an internal group inspector (Appendix III.1) will be responsible for carrying out the farm inspections.

(i) Inspections shall be carried out at each registered producer and production location at least once per year against the GlobalGAP (EurepGAP) Control Points and Compliance Criteria, based on the GlobalGAP (EurepGAP) Checklist. All Major and Minor Musts as well as Recommended control points must be inspected in full.
(ii) There shall be a process for the review of the inspection reports and producer status.
(iii) New members of the group must always be internally inspected prior to them entering into the GlobalGAP (EurepGAP) registered producers list.
(iv) The original inspection reports and notes shall be maintained and available for the CB inspection as required.
(v) The inspection report shall contain the following information:
    a) Identification of registered producer and production location(s)
    b) Signature of the registered producer
    c) Date
    d) Inspector name

e) Registered products

f) Evaluation result against each GlobalGAP (EurepGAP) control point

g) All Major Musts in the Checklist must include details of what was verified in the comments section of the checklist, in order to enable the audit trail to be reviewed after the event.

h) Details of any non-compliances identified and time period for corrective action.

i) GlobalGAP (EurepGAP) status

(vi) The internal auditor (or audit team; see Appendix III.2) will make the decision on whether the producer is compliant with the GlobalGAP (EurepGAP) requirements, based on the inspection reports presented by the internal inspector.

Non-Compliances and Corrective Action Systems

(i) There shall be a procedure to handle non-compliances and corrective actions which may result from internal or external audits and/or inspections, customer complaints or failures of the QMS.

(ii) There shall be documented procedures for the identification and evaluation of non-compliances to the QMS by the group or by its members.

(iii) Corrective actions following non-compliances shall be evaluated and a timescale defined for action.

(iv) Responsibility for implementing and resolving corrective actions shall be defined.

Product Traceability and Segregation

(i) Product meeting the requirements of the GlobalGAP (EurepGAP) standard and marketed as such shall be traceable and handled in a manner that prevents mixing with non- GlobalGAP (EurepGAP) approved products.

(ii) There shall be a documented procedure for the identification of registered products and to enable traceability of all product, both conforming and non-conforming to the applicable production sites. A mass balance exercise must be carried out to demonstrate compliance within the legal entity.

(iii) For Fruit and Vegetables certification: the produce handling site shall operate procedures which enable registered product to be identifiable and traceable from receipt, through handling, storage and dispatch.

(iv) Effective systems and procedures shall be in place to negate any risk of mis-labeling or mixing of GlobalGAP (EurepGAP) certified and non-GlobalGAP (EurepGAP) certified products.

Sanctions and Non-Conformances

(i) The group shall operate a system of sanctions and non-conformances with their producers, which meet the requirements defined in the GlobalGAP (EurepGAP) General Regulations.
(ii) Contracts with individual producers shall define the procedure for sanctions including the levels of Warning, Suspension and Cancellation.
(iii) The group shall have mechanisms in place to notify the GlobalGAP (EurepGAP) approved Certification Body immediately of Suspensions or Cancellations of registered producers.
(iv) Records shall be maintained of all sanctions including evidence of subsequent corrective actions and decision-making processes.

Withdrawal of Certified Product

(i) Documented procedures shall be in place to effectively manage the withdrawal of registered products.
(ii) Procedures shall identify the types of event which may result in a withdrawal, persons responsible for taking decisions on the possible withdrawal of product, the mechanism for notifying customers and the GlobalGAP (EurepGAP) approved Certification Body; and methods of reconciling stock.
(iii) The procedure shall be capable of being operated at any time.
(iv) The procedure shall be tested in an appropriate manner at least annually to ensure that it is effective and records of the test retained.

Subcontractors

(i) Procedures shall exist to ensure that any services subcontracted to third parties are carried out in accordance with the requirements of the GlobalGAP (EurepGAP) standard (see control point All Farm AF.3.6.1).
(ii) Records shall be maintained to demonstrate that the competency of any subcontractor is assessed and meets the requirements of the standard.
(iii) Subcontractors shall work in accordance with the group's QMS and relevant procedures and this shall be specified in service level agreements or contracts.

ANNEX 1 Producer Group Internal Inspector Qualifications

Internal Producer Group Inspector

(i) Inspectors will be able to inspect a sub-scope once factual evidence (as described below) of their qualifications and experience have been verified for each sub-scope by the producer group. The GlobalGAP (EurepGAP) CB will audit compliance with the requirements as set out below during the external QMS audit.

Formal Qualifications

Post-high school diploma

(i) At least a post-high school diploma in a discipline related to the scope of certification (Crops and/or Livestock and/or Aquaculture) or an Agricultural high school qualification with 2 years of experience in the relevant sub-scope after qualification.

Technical Skills and Qualifications

Inspector Training

(ii) One-day practical inspection course setting out basic principles of inspection.

(iii) Two witness inspections (accompanying an audit, could be GlobalGAP (EurepGAP) or other) OR 2 shadow audits by the CB.

(iv) If the group has more than one internal inspector, there must be records of shadow audits between them.

Food Safety and G.A.P. Training

(i) (i) Training in HACCP principles either as part of formal qualifications or by the successful completion of a formal course based on the principles of Codex Alimentarius.

(ii) Food hygiene training either as part of formal qualifications or by the successful completion of a formal course.

(iii) *For Crop Scope*: Plant protection, fertilizer and IPM training either as part of formal qualifications, or by the successful completion of a formal course.

(iv) *For Livestock and Aquaculture scopes*: Basic veterinary medicine and stockmanship training including animal health and welfare issues.

Communication Skills

(i) "Working language" skills in the corresponding native/working language. This must include the locally used specialist terminology in this working language.

(ii) Exceptions to this rule must be consulted beforehand with the GlobalGAP Secretariat.

Key Tasks

GlobalGAP (EurepGAP) Farm Inspections

(i) Inspection of farms of the producer group to assess compliance with the GlobalGAP (EurepGAP) standard.

(ii) To produce timely and accurate reports on such inspections.

Independence and Confidentiality

(iii) Inspectors cannot inspect their own daily work.

NOTE: The relevant CB shall have a complete and current list of all the producer group internal inspectors. These internal inspectors shall be approved by the CBs during the external inspections.

Annex 2: Producer Group Internal Auditor Qualifications

Internal Producer Group Auditor

(i) Internal auditors will be able to audit the Quality Management System of a group and approve the GlobalGAP (EurepGAP) registered members of the group (based on the internal inspection reports) once the producer group has verified their qualifications and experience. The GlobalGAP (EurepGAP) CB will audit compliance with the requirements as set out below during the external QMS audit.

NOTE: Where the internal auditor does not have the necessary Food Safety and G.A.P. training (3.3.2 below), but only QMS training/experience, another person with these qualifications (and identified in the QMS) must form part of the "audit team" to do the approval of the farm inspections (key task 3.4.2)

Formal Qualifications

Post-high school diploma

(i) At least a post-high school diploma in a discipline related to the scope of certification (Crops and/or Livestock and/or Aquaculture) or an Agricultural high school qualification or 2 year experience of Quality Management Systems with 2 years of experience in the relevant sub-scope after qualification.

Technical Skills and Qualifications

Auditor Training

(i) Practical knowledge of Quality Management Systems

(ii) Completion of a short (2 days) internal auditor-training course related to QMS.

Food Safety and G.A.P. Training

(i) Training in HACCP principles either as part of formal qualifications or by the successful completion of a formal course based on the principles of Codex Alimentarius or training in ISO 22000.

(ii) Food hygiene training either as part of formal qualifications or by the successful completion of a formal course.

(iii) *For Crop Scope*: Plant protection, fertilizer and IPM training either as part of formal qualifications, or by the successful completion of a formal course.

(iv) *For Livestock and Aquaculture scopes*: Basic veterinary medicine and stockmanship training including animal health and welfare issues.

Communication Skills

(i) "Working language" skills in the corresponding native/working language. This must include the locally used specialist terminology in this working language.

(ii) Exceptions to this rule must be consulted beforehand with the GlobalGAP Secretariat.

Key Tasks

Quality Management System Audits

(i) Auditing and assessment of the QMS of the producer group for compliance with the GlobalGAP (EurepGAP) standard (according to the QMS Checklist).

(ii) To produce timely and accurate reports on such audits.

Approval of Farm Inspections

(i) The approval of the members of the group, based on inspection reports of the internal producer group inspector.

Independence and Confidentiality

(i) Internal auditors cannot approve any producer inspections done by him/herself.

(ii) Internal auditors cannot audit the QMS if he/she implemented or operates the QMS for the group.

NOTE: The relevant CB shall have a complete and current list of all the producer group internal auditors. These internal auditors shall be approved by the CBs during the external audits

Appendix C

Produce Specifications (Mandarin, Imperial variety)

Source: Woolworths (2008)

GENERAL APPEARANCE CRITERIA			
COLOUR	Uniform pale to full orange. Nil with >2sq cm of light green tinge; limit of 5% of fruit affected.		
VISUAL APPEARANCE	With bright bloom; waxed surface; intact buttons, not torn or missing; thin, easy-to-peel skin; segments easy to separate, <5% of dryness in consignment; no foreign matter. Pre-packs labelled with bar code. Loose Fruit stickered by PLU (or bar code when available) and variety name per Woolworths requirements.		
SENSORY	With smooth skin, not coarse, no foreign odours/tastes.		
SHAPE	Squat to slightly round		
SIZE	As per Woolworths pre-ordered size requirements and minimum net carton weight.		
	Size	Range MM	Count per 9kg Carton
	Small (Prepack)	53-61mm	-
	Medium	63-68mm	80-88
	Large	69-72mm	64-72
	X/Large	73-79mm	48-56
MATURITY	Total soluble solids >8o Brix; with T.S.S to acids ratio >7:1; juice content >33%.		
MAJOR DEFECTS			
INSECTS	With insects (eg. mealy bugs), especially in navel or button, or >15 scales (red/brown spots).		
DISEASES	With fungal or bacterial rots of the skin or flesh (eg. Penicillium moulds, brown rot, soft rots).		
	With dark lesions on the fruit skin (eg. Black spot, Septoria spot).		

	With black decay at the fruit core (Alternaria).
PHYSICAL / PEST DAMAGE	With cuts holes, splits, and cracks (that break through the orange outer layer and white pith layer through to the juice sacks).
TEMPERATURE INJURY	With dark brown depressed lesions (chilling injury) or water-soaked flesh (freezing damage).
	With pale, hard areas of skin (severe sunburn).
MINOR DEFECTS	
DISEASES	With superficial black/grey markings (eg. sooty blotch, sooty mould, Melanose) affecting in >1sq cm.
PHYSICAL / PEST DAMAGE	With brown/black specks (rust mite damage) affecting in aggregate > 1sq cm.
	With cuts that break the orange outer layer of the skin (scratches) clipper damage > 0.5 sq cm
	With up to 15 scale insects (red-brown spots, 2mm diameter).
	With slightly dark and sunken areas (oleocellosis) affecting >1 sq cm of surface.
PHYSIOLOGICAL DISORDERS	With skin badly puffed and separated from flesh segments. Stress damage > 1 sq cm.
SKIN MARKS / BLEMISHES	With dark blemishes (eg stem end blemish) affecting in aggregate >1 sq cm of surface. With Red rind damage > 1 sq cm.
	With light blemish affecting in aggregate >3 sq cm. of surface
TEMPERATURE INJURY	With bleached yellowish-orange areas (slight sunburn) affecting >3sq cm.
CONSIGNMENT CRITERIA	
TOLERANCE PER CONSIGNMENT	Total minor defects (within allowance limit) to be < 2 defects per item Total minor defects (outside allowance limit) must not exceed 10% of consignment. Total major defects must not exceed 2 % of consignment. Combined Total not to exceed 10%.

PACKAGING & LABELLING	Packaging as per Woolworths requirements. Labelling to identify grower or agents name/brand (plus growers name/code if via an agent), address, contents, grade/class, size and minimum net weight. Bulk Loose Product to identify 'Packed On' date (eg. Pkd DD/MM/YY) on outer carton and Pre Packed Product to identify 'Best Before' date on retail unit and outer pack. 'Best Before' date not to exceed 14 days from date of packing while providing not less than 10 days clear shelf life prior to expiry date.
RECEIVE CONDITIONS	Compliance with Quarantine Treatments (if required) for Interstate Consignment. Stacked to Ti Hi specifications onto a stabilised pallet as pre-ordered. Refrigerated van with air bag suspension, unless otherwise approved. Pulp Temperature 5 - 15°C for Receival.(10 to 28oc acceptable for first 4 weeks of the season).
CHEMICAL & CONTAMINANT RESIDUES	All chemicals used pre/postharvest must be registered and approved for use in accordance with the requirements of the NRA regulatory system. Contaminants and Heavy Metals to comply to the FSANZ Food Standards Code MPC's and MRL's.
Specifications reviewable: eg. to account for specific regional effects or adverse seasonal impacts on quality or early or late seasonal variances as agreed with each state operation and communicated formally in writing by Woolworths.	

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