

H.J. HEINZ AND GLOBAL GARDENS: CREATING QUALITY, LEVERAGING LOCALITIES*

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The nature of globalised food networks, or more simply, ‘globalisation’ remains complex and problematic. Complex because we need to take into account our own positionality when conceptualising issues of scale, sites of action and defining elements of risk and regulation. Problematic because whatever choices are made in examining key elements of our complex world, it is important to recognise that at every level of commodity and non-commodity networks, people (social actors) are contesting, redefining and restructuring meanings of globalisation.

The purpose of this article is to provide a preliminary analysis of what globalisation represents to New Zealand fruit and vegetable growers who supply the H.J. Heinz company. Embedded in this task is the need to understand how Heinz is using various production strategies in New Zealand to continue its cautious but steady transnational growth policy into key global markets – particularly Asia. Founded in 1888, Heinz specialises in sauces, pickles and tinned goods. It expanded its operations beyond the United States in the 1950s and 1960s. By the early 1990s, it had forty-eight subsidiaries in twenty-three countries with nearly half of its profits being made outside the United States. In 1997, H.J. Heinz, with revenues of US\$9.4 million, was ranked 167 on the US Fortune 500 list and seventh amongst food companies (*Fortune* 1998). Profits in 1997 amounted to US\$302 million, eleventh amongst US food companies. After Heinz took over the popular New Zealand-based ‘Wattie’ label in 1992, New Zealand was given showcase treatment in Heinz’s 1994 annual report as ‘A Garden in the Pacific’. The beauty and green image of the natural environment was clearly paired with a competitive, open business environment.

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A crucial part of Heinz's expansionist strategies into Asia depended on the traditional and quality appeal of the 'Wattie' label and the capacity to expand production in the New Zealand-based processing plants. Increasing production meant capital investment in plants, marketing, food research and securing raw material supplies with growers. We contend that the shifting relationships Heinz has developed with contract growers provide focus for questions about corporate strategies, farmer responses to company directives and the ways quality standards for food production challenge growers' profitability and control over their resources. The theoretical implications of these issues focus attention on 'globalisation' as a discourse. That globalisation is a project legitimised by business is generally understood. That globalisation is a contested process both at the level of locality – and the level of discourse – has received less attention in the literature. Reasserting the importance of 'scale' in our investigations not only challenges the legitimacy of globalisation discourse, it also provides explicit spaces where social actors contest and experience restructuring relations in commodity networks. Further, 'scale' as metaphor provides a useful critique of hegemonic globalisation discourse.

The research reported on here has some distinctive contributions to make in terms of approach. It draws on field work from four distinct localities in New Zealand (Canterbury, Manawatu, Hawkes Bay and Gisborne) which reflect different socio-spatial and hierarchical entry points into the Heinz organisation. This facilitates a unique exploration of different social and corporate constructions of quality in the context of shifting contractual arrangements between growers and Heinz. It allows us to 'go inside' the company through a series of independent studies over a five year time period and develop a better understanding of Heinz's expansionist strategies and corporate presence in New Zealand.

Following the introduction, this article is organised into four main sections. First, we highlight theoretical concepts and tensions that provide an initial framework for our study. Second, the context for – and implications of – Heinz's historical and contemporary positioning with respect to global trends in convenience foods is discussed in relation to New Zealand's open economy and proximity to Asian markets. Looking at growers' perceptions of the changing nature of contract arrangements with Heinz provides a preliminary view of the complexity of links between domestic and export production and the lived meanings of globalisation. Third, we reflect on the experiences and agenda of growers and corporate personnel involved with various commodity chains in different localities in New Zealand. Finally, the last section discusses the lessons learned from grower and corporate interviews; the nature of Heinz as a corporate presence in New Zealand; revised interpretations of 'globalisation' in New Zealand's processed food complex; and identifies issues for further research.

GROWING GLOBAL, CONTRACTING QUALITY

While growing food remains a quintessentially local activity (Barnet and Cavanagh 1994), the political, social, economic and local developments shaping food producing complexes are subject to 'global' influence. These influences derive from a number of things including: changing consumer tastes, food safety campaigns in far-away countries, international regulatory measures like GATT and WTO, crop

successes and failures in competing nations and the shifting, often obscure expansion strategies of corporate food giants. Starting with discussions of globalisation, this section aims to highlight some key literature and concepts that structure our study of H.J. Heinz in New Zealand.

Food – Thinking Global, Acting Local

The explanatory power of globalisation discourse is particularly appealing when looking at the ways agribusiness corporations shape production conditions in rural communities by constructing global-scale production and consumption networks. The conceptual background for these debates lies in agricultural political economy literature focusing on meta-theoretical constructions of how culture, politics and consumption chains are being simultaneously redefined and restructured in most industrialised countries (Friedmann and McMichael 1989; Friedmann 1993; McMichael 1994, 1996; Le Heron 1993; Lawrence 1996; Marsden and Arce 1995; Buttel 1996; Hartwick 1998 *inter alia*). Central to notions of restructuring global food networks are concerns with sustainability, relations of power, social agency and valorisation. However, some have argued that preoccupation with large-scale food producers and processors has meant that less attention is given to real, local-level changes taking place within agrarian structures of advanced capitalist countries (Winson 1990; Goodman and Watts 1994; McKenna et al. 1998; Le Heron and Roche 1995).

Food network analysis (Arce and Marsden 1993; Marsden and Arce 1995) provides a useful entry point for understanding the dynamics of food production, consumption and valorisation as socially embedded. It also offers a critique of undifferentiated understandings of ‘global structures’ that negate the importance of locality, socio-cultural differentiation and agency in restructuring processes. While offering a valuable critique of meta-theoretical concepts like food regimes (see Friedmann and McMichael 1989), food networks are not a replacement for other networks. Rather, networks analysis allows for explanations that simultaneously incorporate holism and diversity; holism in trying to construct a wider change, and diversity in creating space for multiple actors, institutions and commodity complexes.

In some fundamental ways, food networks analysis builds on the Commodity Systems Approach (CSA) outlined by Friedland (1984). In general, the CSA attempts to strike a balance between global discourses and narrowly focused local-level studies. It argues for balancing explanations of changes at the point of production with broader events shaping processing, distribution, marketing, regulatory and restructuring issues connected to specific industries. Such a balance is necessary given unique socio-economic factors and regime structures that influence specific commodity systems. Including social, economic and political elements in the theorisation of food production and distribution is necessary to avoid oversimplified accounts of agricultural change (Buttel et al. 1990). Five elements underpin the CSA (Friedland 1984): (1) the production process – relating to the specific biophysical properties and growing conditions of the product; (2) grower organisation and organisation – social and political factors structuring participation in specific commodity systems; (3) labour – the uses and arrangements of different types of labour, a subject area which reflects a vast literature in rural

sociology; (4) science and technology – the innovation and application of technology to commodities; and (5) marketing and distribution networks – including the nature of the company or business controlling food processing which includes the politics of distribution, as well as highlighting consumption as a key, socio-political, factor in the politics of restructuring agriculture by introducing questions of control and power over the production-distribution dynamics of commodities.

The explicit inclusion of ‘power’ and ‘control’ in Friedland’s theorisation of commodity systems opened up new spaces in rural sociology and the political economy of agriculture literature to examine the social construction and valorisation of ‘food’. A contemporary reading of CSA highlights a few areas that need to be revisited and expanded. These include: the role of the consumer in defining and contesting ‘quality’; exploring the positionality of power and control with reference to food processing companies and grower-suppliers; conceptualising the real, organisational complexity of commodity production and processing; and suggesting links between national commodity systems and global commodity systems. In particular, CSA could be reworked to include more explicit insights into international marketing and distribution. These issues notwithstanding, CSA offers several viable conceptual starting points for organising research on contemporary agriculture. Further, when focusing on a facet of company evolution and the decision domain of the grower-processor, as in this article, the CSA framework in modified form is more applicable than global commodity chain analysis.

Issues of scale add another layer of complexity to analysis of agribusiness corporations and their negotiated relationships with farmers and rural communities. While ‘new’ sociologies of agriculture are problematising social actors and social activities at multiple sites, it may also be useful to incorporate notions of uneven geographies of rules, resources and restructuring into social processes. Further, given that there is a flux of social action at sites, it is important to recognise that on a daily and seasonal basis, sites of production and social activity are being re-scaled. Here the importance of historical and contemporary geographies of change are crucial to establish spatial context(s) for the operation of commodity systems and food networks.

In the case of New Zealand for example, potato growers who contract to Heinz-Watties engage in spatially complex and temporally flexible arrangements for disposal of their crop. One grower interviewed split his crop between contract sale to the local subsidiary of a Heinz, who in turn are 90 percent orientated to supply local McDonald’s outlets. The other half of the grower’s crops may be further divided to agents for export overseas and/or be sold on the local fresh market. It is important to note that local and overseas suppliers are cognisant of market prices in New Zealand and international markets so that they not only know what prices the ‘local’ market will stand, but are also involved with shaping growers’ local options with respect to global price signals. Alternatively, potato growers may leave their crop in the ground or plough it under if prices are not good enough to initiate harvesting. In these latter instances, global price signals strongly influence a highly ‘localised’ resource use. In studies of contract farming in different localities in Australia (Rickson and Burch 1996; Miller 1996; Fulton and Clark 1996) and Canada (Winson 1990) tensions between globalised multiple sourcing and localised resource use and daily living highlighted how farmers’ capabilities to make land use

decisions were reduced. It was also argued that the ways farmers articulate complex 'global-local' relationships have a bearing on socio-economic differentiation in rural communities. This relates to an earlier point that power, resources and restructuring changes within organisations and within/between localities is unevenly distributed and experienced.

Contracting Food Qualities and/or Quality?

In 'growing global' farmers are also increasingly drawn into various discourses of sustainability, freshness, food safety and perceived quality. Evidence suggests that decisions about quality parameters and farm inputs are being increasingly subsumed by the administrative hierarchies of international agribusiness and financial organisations (Rickson and Burch 1996; Miller 1996; Winson 1990). Further, the contracts growers make with food processors are the primary mechanisms establishing quality standards. Means to assure that certain quality standards are met can range from highly interventionist precision farming (Lu, et al. 1997) to seminars, farm visits and random crop checks by company officials, consultants or preferred suppliers that specific agribusiness corporations may choose to deal with. Contracting quality (or specific qualities) with precision farming revolves around company specified applications of fertilisers, pesticides, water, seeds or other inputs to certain areas where and when they are needed for optimal crop growth. In terms of contract agreements between farmers and food processors therefore, and "...as a result of industrialisation and globalisation in agriculture, land is effectively becoming an organisational asset which the company attempts to control by routinising the way farmers work their land" (Rickson and Burch 1996:177). In this sense, contracts specify an authority system, apportion risks in crop production and represent an organisational alternative to an on-site administrative hierarchy for regulating farm land use (Rickson and Burch 1996).

The issue of food 'quality' is however, highly subjective and socially constructed. Quality can refer to minimum or desired produce characteristics outlined by processing firms (e.g. size, shape, colour, texture, maturity), and/or desired food images created by marketers and consumers. In the case of 'organically produced' food (a term that is open to interpretation) consumer preferences for quality revolve around minimum, or 'natural' intervention in the production process. Contract precision farming pursuing organic and sustainability principles revolves around different sets of issues than conventional precision farming. These might include, testing for zero detectable residues, monitoring soil and water quality, assuring that farm labour is adequately valued, and avoiding the use of genetically altered seed, plant or animal material. Far from being free of 'global' influences, particularly in food imaging and distribution, organic producers adhere to different production practices and principles in creating added value to food (Coombes and Campbell 1998). While organic food is still marginal in the global sense, and is not driven by a mass industrial complex, it does fit particularly well into food networks which contend that there are contestable and negotiable meanings associated with food.

Drawing on concepts of globalisation, restructuring, spatial and organisational complexity, food networks as socially constituted, and relationships between contract farming and quality, the following sections focus more specifically on transnational food giant H.J. Heinz's activities in New Zealand. Taking advantage

of New Zealand's deregulated economy since the late 1980s, Heinz is leveraging competitive production costs and 'clean green' image in New Zealand as a locality to consolidate its position as the key supplier of canned and frozen foods to selected large Asian markets.

THE HEINZ-WATTIE CONNECTION

The Heinz purchase of J. Wattie Industries as part of the restructuring of the Australasian food corporate Goodman Fielder Wattie (GFW) in 1992 revitalised the languishing fortunes of what had in the early 1980s been New Zealand's foremost food company. Whereas GFW grew from the amalgamation of Australian and New Zealand capital, Heinz represented direct foreign investment. The purchase had major implications for Wattie. From the outset, the company was inserted into Heinz's global networks. The purchase fused two companies with very different corporate cultures; both processors of food, Heinz emphasised marketing using its strong internationally known brands, while Wattie was viewed as a seller of food. Where Wattie was the pre-eminent brand in New Zealand (up to 95 percent of market share in some product areas) and strong in Australia (supplanting Heinz in the early 1990s in baked beans), the company was still a minor player in Asia, despite nearly three decades of exporting to the region.

For Heinz the attraction of Wattie was the perception that New Zealand was regarded internationally as a 'clean green' environment, the world's only 'environmental oasis' (*Heinz-Wattie Quarterly* 1997). Wattie, a demonstrated long term supplier to Japan and other Asian markets was thus an ideal acquisition, as Heinz products could benefit from New Zealand's image abroad. When Wattie was acquired, the company's Asian presence was gaining momentum through its frozen food arm, Wattie Frozen Foods. Wattie management viewed the purchase as an enabling arrangement, accelerating a process already underway and which had origins in the limited size of the domestic markets of Australia and New Zealand and high internal transport costs within New Zealand and to Australia. At first the two cultures coexisted. Wattie CEO David Irving spoke of relative independence, against the backdrop of "enhancing efficiencies between the Australian and New Zealand operations, improving productivity and finding new ways to boost exports" (McEwen 1993:21). Middle-order management sensed, however, that they were 'on trial' (Manufacturing Manager, Hastings 1997), a conclusion supported by subsequent developments which focused on the realignment of Wattie systems with those of Heinz. The nature of Wattie's future in the East Asian food complex was gradually comprehended. A key aspect was that Heinz proposed to increase export volume by facilitating market entry through Wattie networks. This was also consistent with Heinz's view of New Zealand as a 'market garden of Asia' (*The Dominion* 11 October 1992), providing frozen and canned produce. To achieve this objective, Wattie staff had to 'globalise their mind-set' (Manufacturing Manager, Hastings 1997) which would, on the one hand, assist acceptance of the Heinz brand in Asia, and on the other, shape attitudes towards quality production in supply areas.

The new context of Wattie's existing operations had other impacts. Processor and grower productivity began to be evaluated in terms of Heinz parameters. Internal rationalisation occurred between the Dandenong (Australia) and Hastings (New

Zealand) plants, with the Hastings facility losing, for example, the premium glass jar line. Expected rates of return on capital became higher; previously Wattie worked to 10 percent approximately but Heinz aims for 20 percent. The five business groups of the late Wattie era have been rejigged to conform with Heinz's management model. Part of this process is the introduction of process centres, from the field to distribution, based on the idea that a chain of quality is built on two principles, that each process centre adds value and has as its initial key customer the next process centre.

Perhaps most significantly, Heinz instituted Project Millennia, a plan to take Heinz into the twenty-first century, which designated eight manufacturing locations around the world, and included the Tomoana site at Hastings as Heinz's source of low-cost, high-quality products for Japan and Asia (*Heinz-Wattie Quarterly* 1997). According to site management (Transport Manager, Hastings 1996; Manufacturing Manager, Hastings 1997) this decision recognised location advantages of the site, including ample supply of clean water, ideal climate for growing fruit and vegetables, substantial space for expansion and the ability to produce for niche markets, drawing on high levels of product innovation. Heinz found, for instance, that the normal product range of the Hastings complex exceeded that of all other Heinz factories world-wide. An indication of Heinz commitment to the Tomoana site is the presence of exchange staff (eight Japanese for a year).

Although Wattie had established processing operations in four main regions in New Zealand (Hawkes Bay, Canterbury, Gisborne and Manawatu), the volume of product projected meant company-grower relations in each region would be pivotal to success or failure. Deep seated tensions have characterised company-grower relations in New Zealand's horticultural sector (Hayward et al. 1998). These stemmed from four interlocking factors. First, growers have resisted becoming specialist suppliers. This has jeopardised, from the company point of view, a regular supply of produce. Second, the processing sector in each region has tended to a monopsonistic or oligopsonistic structure, with only short periods of regional competition (Le Heron and Warr 1976; Hayward et al. 1998). The Hastings Manufacturing Manager (1997) suggests that behaviour has been influenced by grower perceptions that the company is consistently 'the bearer of bad news' and of company experience that growers have rarely treated the company as a 'customer'. Third, the history of price negotiation and payments for different crops has been fraught with misunderstanding and unexpected adjustment. Fourth, harvesting arrangements have been a source of contention, either because of the investment required to mechanise harvesting or the supervision of harvesting gangs.

Fundamentally, Heinz-Wattie's Asian impetus rests on the co-option of growers into an evolving concept of total quality assurance. Company literature describes J. Wattie Foods as "fully integrated from the field to the factory (involving) close partnerships with a select number of major growers who are prepared to match our demanding standards" (J. Wattie Foods Ltd. 1997:7). Separate studies by Campbell (1996), Coombes et al. (1998), Perry et al. (1997), of Wattie's development in Canterbury, Gisborne and the Hawkes Bay respectively, reveal that a new generation of quality concepts were introduced by Wattie Frozen Foods in the Canterbury area as part of a drive to 'Grow Organic With Watties' (Campbell 1996:25; Coombes and Campbell 1998). While initial activities centred on

Canterbury, two other WFF processing plants, in Gisborne and Feilding, also began encouraging growers to sign contracts to provide organic produce. The Hawkes Bay plant in Hastings, canning fruit and vegetables, was a late entrant to organic production, reflecting the greater difficulties associated with organic production of tomatoes compared to peas, sweet corn, carrots and onions (Organic Grower, Hastings 1997; Agricultural Manager, Hastings 1997). Indeed, guaranteeing an environmental standard at each stage of production requires all suppliers to be certified and to supply to specification. Tomato paste, for instance, sourced from overseas poses major problems because of chemical residues and is a major constraint to the wholesale conversion to organic production of the canned lines which are dominated by tomato-based products (including baked beans, spaghetti and many soups).

Heinz's overall strategy appears to have been first to supply and market organic frozen vegetables to Asia and then to extend the philosophy of environmental improvement into canned foods. The frozen foods vegetable processing menu consists of various mixes of peas, sweetcorn and carrots, supplemented by other vegetables in minor proportions. Canterbury was the main supply source for peas and carrots to Wattie Frozen Foods. In the early 1990s the area proved attractive to the company to 'grow' the company's organic activities because the area already featured an incipient domestic organic sector. Having secured a reasonably reliable supply stream in Canterbury the company turned to sweetcorn in the Gisborne area. Unlike Canterbury there was no history of domestic organic involvement; any organic production was exclusively for export. Organic potato production began in 1993, partly encouraged by the success in Canterbury. The most recent development is an initiative to move into canned organic products at Hastings. Table 1 summarises the history of Heinz's organic development in relation to key aspects of grower-producer relations in different growing areas. What is apparent is that the company has altered strategy, from region to region, as it has encountered and resolved different local problems.

As might be expected, the switch to organics is motivated by personal ideologies about sustainable food production and the search for economic premiums generated by 'environmentally safe' organic food. Heinz's strategies are consistent with developments in other commodity chains in New Zealand, including the 'Kiwi-Green' programme under the Kiwifruit Marketing Board and the Integrated Fruit Production (IFP) programme under the New Zealand Apple and Pear Marketing Board. As is the case with Heinz's push to 'safe' foods, evidence from other commodity chains suggests that economic ideology, and the desire to increase market share through product differentiation, motivate growers to switch from conventional to organic production practices (McKenna et al. 1998). It is important to note that where fruit and vegetable growers may have had ideological preferences for fewer chemical inputs into production practices for quite some time, only relatively recently have developments in food imaging and consumer preferences created an economic space for changed social practices of production.

THE 'LOCAL' END OF GLOBAL GARDENS

This section focuses on the experienced relationships between growers and selected Heinz processing plants in New Zealand. The main theme includes how growers are

Table 1. Development in Heinz-Wattie Organic Production, 1991-1998

Area	Canterbury	Gisborne	Hawkes Bay	Feilding
Market for organics	domestic and export	export	adding value by moving all product to organics	export
Processing technology	freezing	freezing	canning/freezing	freezing
Organic crops	peas/carrots	sweetcorn/peas	onions/pears/tomatoes	potatoes
1995/96 organic production	10000 t	2000 t	data unavailable	150 t (1997-98 data)
Company strategy	GOWW to secure base volume	establish organic sweetcorn to solidify organic strategy for frozen foods	gradually change product lines to 'organic'	establish and solidify organic strategy for frozen foods
Processor problems	productivity of conversion farmers versus new entrant farmers	wide variability in site yields in and across seasons	product accountability	product accountability
Attraction for growers	ideology/returns	premiums	ideology/returns	premiums
Grower problems	finding a rotation system involving crops and stock	finding a rotation system (solution: organic sweet-corn, peas and squash)	transition from conventional to organic production; identifying alternative markets	transition from conventional to organic production; grower risk

* GOWW (Grow Organic With Watties).

involved in – and make sense of – multi-scaled food networks and issues of 'quality' through their contractual arrangements with Heinz. We examine this theme by considering: (1) the supply needs and operational strategies of processing plants in Hawkes Bay and Manawatu and (2) growers' changing perceptions of their relationships with Heinz. A related aim is to gain insight into the real complexities of food networks and commodity chains.

A combination of methods were used to approach our study. An attempt was made to build an understanding of commodity production and complexity at selected Heinz processing plants in New Zealand on the North and South Islands. Intensive, semi-structured grower and corporate personnel interviews were conducted in the Manawatu and Hawkes Bay regions and also at the Heinz head office in Auckland from 1994 to the present. Interviews were combined with field

visits in April and May of 1998 that included processing factory tours in the towns of Hastings (Hawkes Bay) and Feilding (Manawatu) and orchard walks (in Hawkes Bay) at sites that were converting to organic production. Information on the processing plants and grower production complexes in Gisborne and Canterbury was gained through intensive interviews with head office personnel and independent research studies conducted in those regions (Campbell 1996; Campbell et al. 1997). Data regarding the nature of contract arrangements between farmers and growers was explained by the growers, commodity agents and corporate personnel. There was some understandable reluctance to divulge individual contractual details to outside interests owing to the commercial sensitivity of specific arrangements. Further, owing to sensitivities surrounding staff restructuring in the Hastings and Feilding processing plants, some caution was evident in personnel's responses which is respected in any reporting of interviews. Rather than offer an exhaustive review of interview data, key insights and issues will be drawn out according to this section's central themes.

Global Gardens – Changing Scale(s) and Complexity

Since the purchase of J. Watties Industries in 1992, Heinz has initiated a number of important changes to its fruit and vegetable supply chains. These include the sale of corporate orchards in Hastings; re-evaluating the types of contract arrangements available to growers; contracting-out key services at various sites, including laboratory work, staff catering, packaging, field consultancy and transport services; realigning production lines between processing plants in New Zealand and Australia; and influencing corporate and grower culture to be more market driven.

In terms of plant organisation, operations are increasingly 'section driven', with each part of the processing and sourcing operations divided into units with detailed costing and profitability goals. According to one operations manager, "... things can get pretty competitive between units, with some units charging back to other units if the quality or price is out of line" (Operations Manager, Feilding 1998). Ultimately, all operations remain under the Heinz umbrella, but the directive from Heinz parent operations is to make costing and responsibilities in plant operations more transparent and linked to individual managers. According to plant managers in Feilding and Hastings, the on-site production processes have evolved as more competitive and stressful in the past five years as a direct reflection of the corporate system imposed by Heinz, which was 'markedly different' from New Zealand owned Watties.

Quality parameters and the scale of processing operations revealed clear tensions between plant managers' relationships with growers and the need to adhere to corporate profitability and production targets. Profitability goals are set at 35 percent over the entire production process (in New Zealand and across global operations), which have not been achieved in the Feilding or Hastings plants (personal communication 1998). However, profitability and efficiency discourses are used as a rationale for increasing the scale of operations. The implications for growers wanting to secure or maintain contracts with Heinz therefore involves getting into larger production tonnages which requires more capital investment and stringent variety and quality control measures. Plant managers in Hastings and Feilding agree that these trends represent costs being passed on from Heinz to the

grower who is either 'squeezed' out of process cropping or adjusts through increasing the scale of operations, debt and personal risk. For example, the Feilding plant, which annually processes 60,000 tonnes of potatoes, 10,000 tonnes each of peas and sweet corn, 8,000 tonnes of carrots, and minor crops of broccoli, cauliflower and zucchini (100 tonnes each), is under increasing pressure from other parts of the Australasian and global operations to rationalise its numerous small-scale, specialised product lines of frozen vegetables. Feilding management acknowledges this would mean 'dumping' certain growers that have established supply relationships with the plant.

Increasing scale, risk and capital investments also extend to servicing operations involved in the supply network. A local Feilding trucking company was 'talked into' investing in a fleet of V-bottomed trucks by Heinz that reduces bruising of the potatoes when they are loaded and unloaded. In turn, Heinz guaranteed the trucking company 70 percent of their business. Only potatoes that are transported in V-bottom trucks will be accepted by the Feilding plant in 1999, and if the growers incur extra costs in contracting these trucks, that will be one more production cost they have to bear. The reality is that rationalisation pressures are increasing from Heinz global operations:

It all comes down to scale. Potato processing is the most significant part of our operations, but in one whole year we source a volume equivalent to two weeks production in Idaho. It won't be long until this place is only doing potatoes (Operations Manager, Feilding 1998).

Part of the problem with multiple small scale production lines at one site is that the quality accountability link between growers and the plant is difficult to follow through the processing operation – and ultimately – Heinz's global inventory. Once raw material enters the processing plant, the individual accountability and quality chain disappears which is a 'major concern for Heinz' (Operations Manager, Feilding 1988). While plant managers at local sites can choose to deal with only the 'best growers' for certain raw material, their local knowledge and personal responsibility is subsumed by corporate preferences for large scale, singularly specialised processing operations that reflect industrialisation and standardisation of agricultural inputs.

The physical flow of agricultural inputs and spatial scale of product distribution is also a highly complex process. Again using potatoes as an example, the production of raw material is localised but acquired under contract by a multinational food processor. The consumption of those potatoes is largely local, as the Heinz Feilding plant sells 90 percent of its production to McDonald's franchises in New Zealand. Therefore, layered and interwoven issues of scale arise in conceptualising the networks and links between locally contracted production for a multinational organisation and local consumption through a global food chain. In this instance, questions arise concerning the extent to which the globalisation of food in New Zealand is assumed to be dispatched for overseas sales. Two important lessons emerge from looking at potato production. First, that it is necessary to differentiate between product types, production sites and points of consumption for various New Zealand food stuffs. Second, that is also necessary not to overgeneralise about the export and 'global' focus of New Zealand produce by drawing on the dynamics of commodity chains governing the meat, dairy and horticultural sectors.

Perceptions from the Field – Pears and Potatoes

Discussion involving grower contracts, quality and scale in processed fruit and vegetable commodity chains are represented in this section by drawing on experiences from pear and potato processing. The Heinz plant in Hastings handles the majority of processed fruit (mainly apples, pears and peaches), tomatoes and some canned vegetables. The Feilding plant only processes frozen vegetables including potatoes, corn, carrots, beans, peas and mixed vegetables.

Growers and suppliers of fruit to Heinz in Hastings have, according to most people interviewed, a 'love-hate' relationship with the company. It is important to note, that fruit suppliers operate under two distinctly different regime structures. Pipfruit growers are part of a national co-operative and have been regulated by the New Zealand Apple and Pear Marketing Board (NZAPMB) since 1948. They Board controls more than 95 percent of the export fruit and used to control the sale of domestic fruit until 1993 when the local market was deregulated. Other fruit growers who supply Heinz with summerfruit (e.g. plums and peaches) are not regulated by a statutory board.

Categorically, all growers agree that the attitudes towards suppliers to the Hastings processing plant changed dramatically in the late 1980s with the sweeping measures of economic deregulation in New Zealand. Related to economic deregulation was the implementation of the Commerce Act at the close of the 1980s which prevented growers from negotiating with company representatives as a group. Presently, it is legal only for individuals to enter into price negotiations with Heinz. The growers interviewed also agreed that since the Heinz takeover of Watties, new directives have been implemented 'distancing the company from the grower'. Contact with Heinz is now structured around contractual agreements dealing with cost and wider scale crop development initiatives, whereas under Watties management, it was felt that supply arrangements were of a more 'personal' nature.

Most growers had their own anecdotal evidence confirming their positive and negative views of Heinz. From these comments, several themes emerged that reflect the changing nature of Heinz's corporate presence in New Zealand. First, as is the case with other process crops, Heinz's discourses of profitability and 'global competition' have been a significant factor in formalising contractual agreements with fruit growers around supply tonnages, quality specifications, detectable chemical residues on fruit, delivery dates and payment schedules. In the case of pears, for instance, the company has argued that international threats to its competitiveness have meant that the price offered for processing pears has been constant for ten years. Taking into consideration increase production costs and inflation, the real price for processing pears has actually declined. In 1988 the price offered for pears was US\$3.50 per tonne, and in 1998 it was US\$3.55 per tonne. As one grower observed,

The only reason the prices haven't declined over the past ten years is because we can cut the trees out. It takes 8-10 years to get a reasonable crop from a new tree, and they [Heinz] know that if we cut them out, they will not be replaced (Pipfruit Grower, Hawkes Bay 1998).

Second, growers readily acknowledged that Heinz does provide a consistent market for growers. However, associated with this is pressure from plant managers and company marketers to provide a totally consistent crop which is not possible

with fruit production owing to the vagaries of weather and less frequently, pests. In being the primary buyer for process-grade crop, Heinz also has complete and arbitrary control over the tonnage accepted which, according to growers, seems to be declining over the years.

Third, Heinz's new management style has increased crop recovery and overall efficiency by improving the processing cool chain for raw materials delivered to the plant. After Watties was purchased, Heinz contracted out numerous services including fruit sourcing and procurement. Divesting itself of corporate pear orchards and total crop management has made Heinz's crop recovery more efficient as they worked with growers and procurement contractors to identify cool chain problems. Growers thought that Heinz was 'more businesslike' than Watties, particularly in improving their quality control through the establishment of 'preferred partnerships' with selected high quality growers.

Fourth, growers note that Heinz has showed improved cost effectiveness in some aspects of its operations, notably packing and canning. However these cost savings have not been passed back to growers in terms of improved prices for supplied fruit, as was noted in the case of pears. Fifth, in the case of crop failure, usually caused by hail damage, Heinz was 'extremely supportive' of its contract growers. After a devastating hailstorm in Hawkes Bay in 1994, several growers commented that advance payments for crops were not recalled and that field managers allowed heavily damaged fruit— fruit that would normally be rejected – to be processed. Finally, and as part of their corporate management style, Heinz has entered into a formal 'partnership' process with growers to promote more direct and efficient information exchange regarding crop conditions, prices, key issues and company programmes. The reality of the 'partnership' however, is very one sided:

Its supposed to be a partnership, but its a very one-way exchange. Heinz sorts out the prices, tonnage and quality conditions and growers either accept them or don't supply Heinz. Its that simple (Pipfruit Grower, Hawkes Bay 1998).

In many ways, the qualitative nature of the grower-Heinz relationship in the potato commodity chain is similar to that for fruit growers. Contractual agreements with Heinz imply a subsumption of farmer control over their land, labour, inputs and ability to define 'acceptable' quality standards. However, the nature of potatoes as a crop, suggest a certain durability that fruit does not have. Potatoes can be left in the ground once mature for a much longer period of time than fruit can be left on the tree. In some respects, this may allow the grower more time or leverage to make decisions about where and when to sell the crop. 1997 saw a real decline in prices for contract potato growers of 7 percent. This followed several years of poor prices, making supply contracts with Heinz less attractive. Where potato growers could withdraw from supplying Heinz and export their own crop, many fruit growers may not have the same opportunities. Pipfruit growers' flexibility is restricted owing to the highly perishable nature of the crop and the existence of the NZAPMB controlling pipfruit exports.

The different qualities of potatoes as a crop lends to a more varied participation in the supply chain than for fruit growers. Of the 445 registered potato growers in New Zealand, about 30 of them produce approximately 80 percent of the national crop. In contrast, there are 1600 pipfruit growers. 'Large' potato growers produce

in the order of 1000 acres. A second tier of medium growers produce about 30 acres, while small growers produce 5 to 10 acres. The middle group are sometimes smaller farmers not engaged exclusively with potato cropping who will exit the industry when prices fall. When prices fall for fruit growers, diversification is often more difficult owing to the nature of tree cropping. In fact, field work supports the notion that there is a well developed fresh potato export commodity chain between New Zealand and some Asian markets including Hong Kong and Singapore that has nothing to do with Heinz. For example, several large potato growers in the Manawatu region who are under contract to the Feilding plant, also export fresh potatoes through agents or sell to intermediaries (like Turners & Growers) who then export to Asia. Growers indicated that this helped spread their risk and reduced overall reliance on Heinz.

With the appearance of multinational food giant McCains in New Zealand in the mid-1990s and the construction of a potato processing plant in Timaru on the South Island, the competition for securing potato and other vegetable growers, supplies and market share has increased. Interview data suggested that McCains is attempting to 'lure away' organic potato suppliers from Heinz, which has a better developed field support system to help growers through the transition period between conventional and organic growing. Plant managers at the Feilding site suggest that while there is 'some company loyalty to Heinz', in general growers will go with the best prices. This type of competition is not seen in the fruit processing commodity chains. Interestingly, Heinz is building a new potato coolstore facility at its Feilding site that is 90 percent financed by growers and 10 percent financed by the company. Heinz has guaranteed growers that it will support their venture for a minimum of ten years of financing. To some extent, this may be interpreted as a relatively low risk, low cost venture to further secure contract supply relationships with local potato growers.

The export market for New Zealand's processed vegetables continues to grow at impressive rates. It is projected to double by the end of the century to about US\$250 million. Contributing to overall industry growth rates is Heinz's ongoing upgrades to its potato processing line in Feilding. French fries are a growth industry, and the trends towards westernization of the Asian diet suggest there is a potentially huge market for Heinz frozen fries, either through supplying McDonalds outlets in Asia, or by selling bags of frozen french fries to Asian supermarket chains. Although the Feilding processing plant is rumoured to be for sale, "... french fries are a growth industry and that plant isn't going anywhere" (Potato Grower, Manawatu 1998). Whether or not Heinz retains corporate interest in the plant is not important to local potato growers. Rather, the point is for the site to remain operational under the assumption that new and/or existing export networks will be developed if Heinz sells the factory.

DISCUSSION

Reflections on our field studies with fruit and vegetable growers supplying Heinz processing plants suggests some similarities and key differences between the two commodity chains studied. The fact that, "Vegetables are inscribed in English as useful food for humans while fruit is perceived as closer to the dimension of luxury

and sensual pleasure” (McKee 1995:5) imply different profitability dimensions may be associated with fruit versus vegetables. However, it remains unclear whether that ‘luxury’ dimension associated with fresh fruit, translates to processed fruit. The push to organics by multinational food processors like Heinz, may be a way to bridge this gap by creating ‘quality’ value added.

The data collected from interviews in our study indicates that the company has the upper hand in contract ‘partnerships’. In a deregulated economy – and in the context of the Commerce Act – it is difficult for growers to exert pressure against Heinz in negotiating contracts. The primary means of grower resistance in both commodity chains examined remained withholding crops or selling elsewhere. However, the reality of fruitgrowers ‘selling elsewhere’ is difficult given current world oversupply of all fruit and depressed international prices for many of the vegetable crops produced in New Zealand. To a certain degree, ongoing restructuring of plant and product lines within Heinz Australasia also keeps New Zealand contract growers and plant managers guessing as to what products will be preferred in the drive to scale economies and what volumes will be accepted. More noticeable among potato growers than pear growers was the fact that the potato commodity chain appeared to offer more options for individual activity to export or sell crops locally. Heinz captures only a portion of the potato commodity chain, while the nature of the crop allows for greater ease of movement in and out of production. Owing to the presence of the NZAPMB regulating pear exports and the nature of pears as a tree crop, fruit growers may be less able to pursue alternative options to sell their crop. This perception was reflected in orchardists’ comments about being... “historically reliant on Watties to take the excess fruit” (Pipfruit Grower, Hawkes Bay 1998).

The Heinz processing operations in New Zealand have the right mix of access to – and quality of – raw materials which makes for highly competitive products domestically and internationally. The move to sourcing organic material is also an important factor in breaking into and capturing market share in the huge Asian market under the recognised brand label of ‘Wattie’. The impacts for growers of Heinz expansionist behaviour are mixed. On the positive side, certain commodity chains including potatoes, fruit and to a lesser extent tomatoes, are benefiting from increased capital investment, product research and sophisticated international marketing techniques. Heinz is also proving to be a consistent buyer of raw materials, has formalised grower-plant partnership arrangements for information sharing and has been seen to be an understanding customer in cases of unexpected crop failure. Heinz management also maintains that it can provide economies of scale in purchasing, manufacturing and overhead that reduce costs associated with New Zealand-owned Watties. These savings increase the cost and export competitiveness of New Zealand based Heinz-Wattie operations. However, increased cost and export competitiveness has not automatically lead to more lucrative supply contracts with the company. Further, given that the structure of contract farming has been imposed by an outside multinational organisation, growers are finding they have less control over strategic crop and land use decisions.

The shifting power relationships of contract negotiation and supply between fruit and vegetable growers and Heinz also brings to light the practical and theoretical

complexities of scale in analysis of food networks. The ways growers use various commodity chains that supply local fresh market and/or international food processing companies and/or intermediate export agents points to the need to differentiate 'scale' in food network analysis. Further, there is a certain simultaneity in constituting local-global relationships between growers and Heinz that implies fluid power and scale positioning. Growers can use these fluid relationships to increase their bargaining power, reduce personal risk and increase profitability. Heinz can use these fluid relationships to increase economic concentration and organisation as a way of subsuming grower autonomy and pursuing co-ordinated expansionist strategies. While contracts can be studied as substitutes for bureaucratic hierarchies (Rickson and Burch 1996), more attention needs to be paid to the fact hierarchies linking 'global' companies to 'local' sites are spatially complex and permeable allowing for a variety of production, processing, marketing and consumption arrangements with a single commodity chain.

Finally, the impacts of the Asian economic crisis at the close of the 1990s are undoubtedly having an impact on overall economic performance for New Zealand, which is heavily export reliant, and for Australia. Heinz purchased Watties in 1992 when the Asian economies were experiencing record growth. It will be worth watching to see if Heinz keeps Asia as a target market in the long term or switches quickly to other markets, perhaps Latin America. If there is a sudden switch away from Asia, this could mean wholesale changes to Heinz Australasia, and a dramatic shift in the scale of Heinz global operations away from New Zealand as a production platform. Left at the level of conjecture is whether and/or how Heinz would operate and develop its New Zealand production sites for an Australian-New Zealand market, with a combined population of only thirty million people. Not to be forgotten in the context of global-scale strategies are the growers who are left to anticipate and negotiate their way through any potential restructuring changes.

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