Research Report 42

Contesting the food system in South Africa: Issues and opportunities

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Report commissioned by the second economy strategy project

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Published by the Institute for Poverty, Land and Agrarian Studies, School of Government, Faculty of Economic and Management Sciences
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Institute for Poverty, Land and Agrarian Studies research report no. 42

ISBN: 978-1-86808-713-6

November 2010

Copy editor: Lee Smith
Series Editor: Rebecca Pointer
Cover photograph: Stephen Greenberg
Layout: Designs4development, info@d4d.co.za
Typeset in Frutiger
Printing: Megadigital

Thanks to the Norwegian Centre for Human Rights at the University of Oslo, and the source of the funds, the Norwegian government, through the Norway-South Africa Programme.

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Introduction

Rising food prices have become a growing concern globally and in southern Africa. In South Africa, where food availability is not an issue at present, the response has been to try to improve access to food, mostly through the provision of grants and food aid (e.g. school feeding schemes). There is a lesser emphasis on widening the base of food production, since the dominant idea is that the existing system is able to meet food needs. This report widens the debate about food production and distribution in South Africa to consider some of the entrenched power dynamics that shape the way these happen, and to consider whether a more radical transformation of the agro-food system is required to ensure adequate access to food for all.

A useful approach to considering food production and distribution is the value chain approach pioneered by Gary Gereffi and others in the 1990s. Value chain studies emphasise corporate strategies in structuring the flow of agro-food commodities. This has revealed a great deal about the way food is constructed as a commodity, and concentrated corporate power is a feature of agro-food commodity chains. But the agro-food system is not merely limited to corporate value chains. There has been little research on the remainder of the system, the 'informal' sector, 'small-scale' production and distribution whether for commercial purposes or not, and processing and distribution that wholly or partially fall outside corporate structures. In part, this 'remainder' is tightly integrated into corporate value chains.

But what do we know of where and how that integration occurs, or what possibilities might emerge from non-integrated, non-corporate activities on food production and distribution? This requires empirical research. This report carries out the more modest task of providing an initial outline of some potential areas for deeper consideration. It considers the structure of the South African agro-food system, and looks at points of possible intervention that could not only open the system to greater involvement by those who have been marginalised or passively incorporated into that system, but that also offer potential pathways to structural change that could deepen diversity in the agro-food system and reorient it to the needs of the poor, both as historically subordinated producers and as consumers.

Agro-food systems, commodity chains and chain governance

The commodity chain approach is useful in identifying key points of economic activity in agro-food systems and the distribution of power. Gereffi (1994) identifies producer-driven chains which tend to be capital-intensive, and buyer-driven chains which tend to be labour-intensive. 'Lead firms' in dominant nodes control certain functions as a group that allow them to dictate the terms of participation by other actors in different functional positions in the value chain. Lead firms use their power to structure the chain in such a way that costs and risks (for themselves) are reduced, and speed and reliability of supply are increased (Gibbon 2000). In the past 30 or 40 years, global food production and distribution have experienced increasing levels of corporate concentration. This was partially a consequence of key technological innovations such as canning and freezing, mobile refrigeration (Friedland 1993) and, perhaps more fundamentally, information technologies that transformed retail–supplier relations and enabled the establishment of dedicated supply chains (Harris-Pascal et al. 1999; Jensen 2000). New technologies in seed production (first hybrids and then genetic modification) and the capital-intensive nature of agrochemical production concentrated ownership in input supply. Agricultural production remains the most diverse node in the food system, with large numbers of producers, although large-scale industrial production is also strong. In South Africa, there is a wide base of agricultural producers but value is almost entirely in the hands of a relatively small core of industrial producers. Grain storage and trading, food processing and manufacturing and retail have all experienced corporate concentration globally (ETC Group 2009). However, these processes of concentration do not take place evenly: they differ both geographically and across commodity chains. Key aspects of difference between supply chains include institutions, functioning of markets and commodity characteristics (Swinnen 2007).

Individual commodity chains are situated in broader agro-food systems that incorporate them and link them into other economic sectors or chains, sometimes quite closely: upstream to the mining-chemicals-energy complex, and downstream to the non-food retailing sector. In between are transport and logistics, and a range of financial and other services that bind agro-food systems into the overall economy and the broader global economy. But the agro-food system is more than the sum of individual commodity chains. In South Africa, these links give agriculture a far greater role in the national economy than its direct share of GDP would suggest. Agriculture's contribution to gross value added was just 2.2% in 2009. However, agro-processing's share of national GDP and total manufacturing sales was 10% and 16.4% respectively in 2009, making it the third largest manufacturing sector in South Africa. For every R1 million of agricultural production, an additional output of about R600 000 is generated in the rest of the economy. In [year], formal employment in agriculture was just 2% of national employment, but over 6 million people depend on agriculture for their livelihood – around 13% of the total population (Department of Agriculture, Forestry and Fisheries 2010: 7).

Commodity chain analysis tends to focus on the industrial–corporate production and distribution system and neglects to incorporate the base from which this grew, the pre-industrial systems of food provisioning that preceded it. Industrial technologies and ways of organising work do spread, resulting in a tendency for localised food systems 'to become integrated into a more linear world system based on the principles of comparative advantage, standardisation, geographical division of labour and control by a few large corporations and trade agreements'.[1] The emphasis here is on integration: localised, pre-industrial food systems were not entirely obliterated by industrial–corporate production and distribution

1 http://www.diversefoodsystems.org/

processes, but neither did they continue to exist as distinct, separate food systems in parallel with the 'food regime of capital' (Araghi 2003:51). They integrate unevenly in dynamic processes that produce poor alignments, contradictions and spaces for change. In general, agro-food systems do not conform well to industrial processes, and 'pre-industrial production processes and agricultural products remain as enduring sources of competition, benchmarks of quality, and as culturally potent alternatives to the industrial paradigm' (Goodman 1999:4). What goes for agricultural production also goes for input acquisition, processing or trading. Industrial production and distribution with a corporate institutional form – and the technologies and forms of work organisation they encompass – thus intersect with specific, unique contexts that mediate, shape and adapt in ongoing, dynamic processes of constitution.

The distribution of power in industrial commodity chains is organisationally activated through chain governance. The rise of corporate concentration in food commodity chains is inseparable from the breakdown of institutions of national co-ordination in the 1970s (McMichael 1994) and the consequent rise of private regulation. Private chain co-ordination rests on high concentrations of private economic power (Gibbon & Ponte 2005). It does not merely replace the state, but alters the terms of governance and regulation to serve specific interests. In the agro-food system, these interests drive the 'modernisation' of food production, procurement and distribution.

Broadly, regulation theory has something to offer in understanding the 'social structure of accumulation' (Aglietta 1987; Gelb 1991) that envelops a mode of production, and which changes as the society changes. This is the way that a whole society is structured and held together around notions of work organisation. Governance and regulation are central to the ongoing construction of this social structure and the forms of work it encompasses. This broader level of governance is replicated within specific commodity chains. There is a distinction between immediate forms of co-ordination (administration) and overall forms of governance (Gibbon & Ponte 2005). Administration is an important component of governance – making sure the system functions on a day-to-day level. However, overall governance is about negotiating the balance of power across the chain (or in the agro-food system as a whole) and ensuring that contradictions or tensions do not overwhelm the system. This is more open-ended than administration, and it is at this level that other social actors who are not involved in day-to-day administration can influence the structure, purpose and functioning of commodity chains.

The state and private sector play dominant roles in governance. These roles are not static and are constantly being negotiated. Private economic power is still mediated by the state in a dialectical relationship. Recent shifts in the conception of governance are emerging. Anarchic (market) or hierarchic (state or 'imperative') notions of governance are being replaced with heterarchic notions of governance, or 'reflexive self-organisation' (Jessop 1998). This refers to a far more co-operative form of governance between state and private sector. Forms of heterarchic governance include 'self-organising interpersonal networks, negotiated inter-organisational co-ordination, and decentred, context-mediated inter-systemic steering' (Jessop 1998:29). The latter 'involves the coordination of differentiated institutional orders or functional systems (such as the economic, political, legal, scientific, or educational systems), each of which has its own complex operational logic such that it is impossible to exercise effective overall control of its development from outside that system' (Jessop 1998:30). The state plays a key role in 'meta-governance', managing the respective roles of these different modes of co-ordination. The distribution of power, and hence governance arrangements, differs from chain to chain. The distribution of power cannot therefore be worked out a *priori*, but requires context-specific, empirical investigation.

The apartheid agro-food system and its legacy

The apartheid agro-food system grew out of a long series of laws and policies that shifted power towards white commodity producers and agribusinesses at the expense of all consumers. It was rooted in black land dispossession and suppression of black commercial activity, including the almost total marginalisation of black agricultural production apart from some micro-scale non-commercial activity. Governance was heavily reliant on overt state intervention and co-operative governance arrangements with white agrarian interests. The governance model tightly structured the relationships between actors in commodity chains and in the agro-food system as a whole in favour of white agricultural producers and agribusinesses. The boards were public–private partnerships, to speak in today's parlance, statutory bodies but dominated by a range of private and quasi-private (the co-ops) interests. The co-ops were owned by their farmer members, but acted as proxies for the state. For example, they were appointed sole agents of the control boards for winter grains, deciduous fruit and citrus fruit (World Bank 1994). This allowed the National Party to shore up and retain white agricultural interests as a core constituency (O'Meara 1996).

The regulatory structure created what appeared to be racialised urban–rural spatial dualism in the agro-food system. This was particularly pronounced in the relegation of black farmers to the then homelands. However, the system was quite tightly integrated. It would be inaccurate to talk about a divide between urban and rural food distribution systems, as Louw et al. (2007) do. Under apartheid, rural distribution to 'white' towns was merely an extension of the urban food distribution system. Millions of black farm dwellers on commercial farms were dependent on these distribution systems for their food. Often the connection was indirect, and they were very adversely incorporated into the value chains, since they were price takers (suppliers had more control over the price of food than buyers) and faced limited choice of product. Agricultural commodity producers and processors sold to regional or local produce markets, general dealers and supermarkets. White farmers bought in bulk and either provided food to black farm workers as part of their wage ('payment in kind'), or resold to black inhabitants on the farms, sometimes at inflated prices. In the homelands, general dealers bought food supplies through the same channels as retailers in the 'whites-only' areas did. Until price and marketing deregulation in the 1980s, retailers were price takers in some key commodities.

One important pillar of the apartheid agro-food system was regulation of marketing and pricing. This regulation was a continuation of the earlier regulatory framework stemming from the 1937 Marketing Act and other legislation that regulated marketing and price control over a wide range of products. More than 75% of agricultural products in South Africa were sold under controlled marketing schemes in 1990 (World Bank 1994:61). These schemes included single-channel fixed-price schemes which legally obliged producers to sell their products through the scheme at fixed prices. This was applied to most grains, including maize and wheat. In single-channel pool schemes, producers marketed their products through a board-administered pool and received advance payments on crops as well as deferred payments once all calculations were completed and costs deducted. Contract farming operates very much on this model, but with a private company instead of a state entity managing the pool. Export crops fell into this category. Surplus removal schemes did not require mandatory sales to the scheme, but assisted farmers by agreeing to buy any produce falling below a fixed minimum price. If the minimum price was greater than the cost of production, this would lead to overproduction as producers could not lose. Until 1992, the dairy industry was an example of this type of scheme. In supervisory schemes, the board mediated price and contracting arrangements between buyers and producers (World Bank 1994). An important part of the regulatory framework was food price control. There were price controls on milk, butter, cheese, bread, flour and maize meal (World Bank 1994). This ensured that food retailers were price takers in the maize, wheat and dairy chains, with limited power.

These arrangements began losing coherence in the 1970s and this disintegration gathered pace in the 1980s as the apartheid state ran into political and economic crisis. The state began reducing its own regulatory involvement in specific commodities as well as in the agro-food system as a whole. This opened the space for specific private white interests to step in and reorganise regulation in their own interests. This happened in uneven ways, benefiting larger producers and agribusinesses in some commodities, for example sugar, fruit and wine (Bayley 2000). Indebted farmers who had relied on state subsidies for their survival (up to 30% of all white farmers) were left exposed to market forces that were increasingly global as trade liberalisation also took effect. Laws were passed allowing for the privatisation of the white co-ops, which permitted white agriculture to reposition itself and privately appropriate the congealed value of decades of state support and monopoly control over entire nodes in value chains (Bernstein 1996). The ending of the single-channel and other regulated marketing systems caused a destabilisation of quality controls, and led to private regulation to ensure reliable supplies of produce of the required quality, with intensive private supervision and control of production processes (Swinnen 2007).

The restructuring of the apartheid agro-food system sharply altered the balance of power towards corporate retailers and brand owners and away from agricultural producers. It led to increased concentration throughout the agro-food system, even though in some commodity chains and some nodes the number of entrants increased. This was particularly so in marketing, which in many commodity chains had previously been a monopoly. The restructuring left consumers exposed as food price controls were abolished. This was justified on the basis that deregulation would remove the price distortions characterising the apartheid regulatory system, and eliminate the favouritism of producers over consumers. Theoretically, this would reduce consumer prices by removing incentives for inefficient production, and increasing competition. In practice, real food prices increased at the end of the 1980s and flattened out after reaching higher levels for most of the 1990s (Bayley 2000). Per capita consumption of maize, wheat and vegetables was lower in 2008 than it had been in 1985 (National Department of Agriculture 2009:107). At the same time, price volatility increased sharply, exacerbated by trade liberalisation and the fluctuating fortunes of the currency.

Corporate retail penetrated to some extent into homeland and township areas, mostly after 2000, especially around conglomerations of economic and social activity, like the larger towns (Bienabe & Vermeulen 2007). Distribution tributaries penetrated deep into the rural areas, although costs of transporting food products were higher. The corporatised formerly white co-ops also expanded their reach into the homelands, providing services on both sides of agricultural production: input supply to farmers, and milling and storage downstream. The overall result was the consolidation of a corporate core and some restructuring of food value chains to integrate previously racially bifurcated agricultural production, distribution and retailing along corporate lines.

The distribution of power in agro-food value chains in South Africa

Key agro-food commodity chains in South Africa are maize, poultry, cattle, deciduous and citrus fruit (significant export), milk, vegetables, wheat and sugar cane (significant export). Maize is a key product in the South African agro-food system. It is the staple food for the majority of the population and is the basis of animal feed. As such, it drives meat, dairy and egg prices as well (Moola 2010). This paper emphasises fresh produce because it has attracted the most scholarly attention, and because it is intimately linked with the consolidation of corporate retailing.

Retail

South Africa has experienced a rapid rise in corporate food retail power in the past few decades, spurred by deregulation and fitting into broader global processes of retail concentration since the 1980s (DFID 2004; Weatherspoon & Reardon 2003). The supermarket sector as a whole controlled about 55% of national food retail in the early part of that decade (Weatherspoon & Reardon 2003:1). Between 2008 and 2010, formal retail's share of the food market increased from 62% to 68% (Planting 2010: 34). Six retail chains (Shoprite, Pick n Pay, Spar, Massmart, Metcash and Woolworths) dominate the corporate food retail sector, controlling over 94% of the grocery market between them. The top two, Shoprite and Pick n Pay, held an estimated 47.6% market share between them in 2007,[2] with a combined turnover of R61.7 billion (Competition Commission 2008:29). From 1999–2006, overall corporate supermarket store numbers grew by 38% (Louw et al. 2007:24). The South African food retail sector has been characterised as 'an extremely tight oligopoly' (Botha & van Schalkwyk, cited in Louw et al. 2007:19).

No longer constrained by racially based limits to the location of supermarkets, and spurred by the growth of a black middle class, there has been recent movement into the urban townships and the towns in the former homelands. Spar is leading this charge. Pick n Pay's merger with Boxer in 2002 gave it a footprint in rural retail targeting the LSM1–4 market.[3] In 2010 there were 92 Boxer supermarkets countrywide.[4] Franchising is an important aspect of this corporate expansion. Spar is 'a collection of independently owned stores united by a common supplier and brand manager' (Bleby 2010c:14), which allows individual retail entrepreneurs access to a brand and a supply network while still retaining ownership and some level of control over business strategy. Franchising is not limited to Spar, even though this supermarket chain is the most prominent in rural towns. Around 45% of Pick n Pay's food stores are franchises.[5] Eighteen-and-a-half percent of Shoprite's South African stores are franchises (Bleby 2010c: 14). This corporate expansion is resulting in the crowding out of 'informal' and small retailers (Louw et al. 2007).

The remaining 32–45%[6] of the food market lies outside the corporate sector. This includes the 'informal' trading sector, incorporating all sizes from some small general dealers to spaza shops to roadside vendors, as well as government procurement. These markets are 'inherently tied to lower costs of food, local sourcing of produce and, at times, quicker transportation within the network or supply chain,…bring[ing] the retail outlet closer to the…resident, and thus creat[ing] a more effective food supply mechanism' (Abrahams 2010:130). 'The poor' tend to have similar shopping patterns around the world. 'They buy low value-added goods, in small units, with minimal processing and packaging. They lack easy access to transportation and hence tend to make most of their food expenditures within walking distances of their homes or work' (Jayne 2008:129). Per unit prices tend to be higher for smaller units, raising the cost of food for poorer consumers. This means that roadside stalls and small kiosks (spaza shops) are important outlets for food distribution. In some places, fragmented 'informal' markets have consolidated to form larger wholesale markets, and have commercialised in response to the entry of supermarkets (Abrahams 2010). Distribution

2 http://www.fastmoving.co.za/retailers/pick-n-pay

3 The LSM bands are income categories for the population, with 1 being the lowest and 10 being the highest.

4 http://www.picknpay-ir.co.za/financials/annual_reports/2010/group-profile.html

5 http://www.picknpay-ir.co.za/financials/annual_reports/2010/group-profile.html

6 'The remainder of Weatherspoon and Reardon's 55% estimate and Planting's 68% indication for the share of formal sector in the first paragraph of this section.'

to government institutions and programmes, such as hospitals, the military or school feeding schemes, is potentially important as a channel for food distribution. This is completely under-researched, but presents an opportunity for public action in procurement and distribution that is already under the control of the public sector but not systematically integrated into or aligned with black agricultural producer or 'informal sector' policies.[7] Although as a percentage of gross turnover non-corporate actors' share of food trading is lower in value than that of corporate retailers, they still serve as distribution outlets for millions of people, even if mostly as an adjunct to the corporate retailers. Apart from the large numbers of people that receive services from 'informal' traders, for many people trading activities constitute their only form of income (Murray 2008; Tomlinson & Larsen 2003). To date, little consideration has been given to potential interventions that seek to strengthen non-corporate trading – whether through better integration with industrial–corporate value chains or as part of other non-corporate systems of production and distribution, or some combination of those.

There is a dominant, normative idea that food systems will 'naturally' evolve towards supermarkets, and consequently the demise of informal retail is a 'necessary progression' towards modern retail chains (Abrahams 2010:119, 122). The notion of a 'modern', 'formal' food retail sector is constructed on the basis of taking chain supermarkets as the norm, and then designing a regulatory framework based on the contracts and standards they require. The difficulties with combining the 'formal' supermarket and 'informal' trading sectors stem from the difficulties in applying the regulatory framework of the former to encompass the latter. For commercial agricultural producers, the 'informal' trading sector is a dumping ground for lower-grade produce, although these traders also buy high-quality produce for similar prices as supermarkets (Bienabe & Vermeulen 2007). 'Informal' is here equated with inferiority, or being unequipped to interact systematically with corporate food chains. This 'failure' belongs not only to the character of non-corporate trading, but also to the bias of the regulatory system itself. In spite of this, SMME (small, medium and micro enterprises) and development policy tend to assume that the task is to get non-corporate traders to conform to corporate standards, rather than to create more flexible and locally appropriate systems of intermediation.

The growing dominance of supermarkets in food retail is not a 'natural' development driven by abstract laws of economic change: in many cases, the success of supermarkets and the dwindling of other retail spaces resulted 'from the removal of funding from state storage facilities and public distribution centres, and attempts to quash the informal economy' (Abrahams 2010:122). In the urban areas, state attempts to control the 'informal' trading sector have focused on consolidating geographical location and deploying health by-laws to prevent the unregulated spread of food trading in the city streets. This eliminates locational advantages for some traders and increases competition between vendors by centralising the locations at which trading is permitted. Attempts to formalise these traders were accompanied by efforts to convert them into rent-paying businesses, efforts which were actively resisted by many (Gotz & Simone 2003; Murray 2008). Although the growth of supermarkets certainly has an important impact on the agro-food system, this is not the only driver of change in the system. Change is also driven by local institutional, technical and demographic change, and by history. This means there is 'no deterministic "future of smallholder farms" or food systems' outside of practical action, strongly driven by government policy and investment (Jayne 2008:109–10).

End consumers are very weak in the agro-food system as a whole. Power is fragmented among atomised consumers who generally have to accept the range of prices and quality offered to them. A small layer of consumers with the purchasing power to demand better quality or particular ecological farming practices has been segregated into a premium tier. Retailers have created tiered markets with sometimes very fine gradations between market segments. For example, maize meal is graded into unsifted, sifted, special and super categories, each targeted at a segment of the market (National Agricultural Marketing Council 2003). Corporate retailers define these market segments based on LSM bands. Most of the corporate retailers have developed distinct brands for different market tiers: Shoprite has Usave for the lowest tiers; Hungry Lion, Shoprite and OK for the middle tiers; and House and Home and Checkers/Hyper for the upper tiers. Pick n Pay has Boxer for the lower and middle tiers and Pick n Pay for the upper tiers.

7 This point arose in informal discussion with Milla McLaughlin and others during the Learning Journey to Limpopo as part of the Southern Africa Food Security Change Lab.

Woolworths is the only major food retailer that exclusively targets the upper tiers of the market. Franchising is also used to differentiate markets. Both Pick n Pay and Spar franchises target lower market tiers. Spar separates its stores into corporate and franchise divisions. Even though the store brands target different market tiers, retailers may retain some mix of mass market and high-value products within individual stores.

This tiering of markets has implications for sourcing and supply chain co-ordination, especially in fresh produce. For the purposes of immediate intervention points, fresh produce value chains are probably the most important to consider, since processed goods (as will be seen below) are almost entirely dominated by corporate producers. In contrast, there is a potentially strong base of fresh produce growers. In the case of Spar, for example, corporate stores must procure all their fresh produce via the retailers' national distribution centre. But franchise stores have slightly more flexibility, and are permitted to procure up to 10% of their total fresh produce from other sources. This opens the door for subordinated smallholder producers to get directly into local supermarkets, especially in former homeland and small town franchises (Bienabe & Vermeulen 2007).

Sourcing from organic or small-scale producers is often used as part of the branding effort in the form of corporate social investment (CSI) and 'community involvement strategies' (Bienabe & Vermeulen 2007). It is used as a brand tool that captures non-price notions of quality (for example, sustainable production techniques) that are then factored into the price. The emphasis of this type of CSI is on production methods with perceived ecological or environmental benefits (organic farming, water saving), with an added emphasis on the production process. However, working conditions along the chain are apparently of less concern to consumers, as expressed through the branding of products. While Woolworths has a campaign around the transition to organic or ecological farming, there is little if any reference to working conditions and payment for farm workers, or other workers along the value chain. An underlying feature of CSI is that it is an entirely corporate-driven project; it is carried out in the interests of corporate profitability. The model of social inclusion is entrepreneurship. CSI reinforces corporate control by aligning 'community' initiatives with corporate strategies in the agro-food system.

The premium food tier is not entirely separate from the mass market, and over time innovations and quality may become 'massified' and spread throughout the food distribution system. Although this has potentially positive aspects, for example higher productivity, lower prices, greater access to food and improved food quality, the criteria on which quality is based are not to be taken at face value. The 'flight to quality' by middle- and high-income consumers in the United States and Europe increased rapidly following a series of food-related scares (for example, BSE or mad cow disease, foot-and-mouth disease, H1N1, 'swine flu') that undermined trust in mass-produced 'placeless' and 'faceless' foods. These consumers could afford to seek alternative provisioning by demanding greater accountability in the food chain (Goodman 2009). Because of their purchasing power, these alternatives were absorbed into the mainstream, for example through organic lines in supermarkets. In the context of overproduction of agricultural commodities and corporate concentration and competition in retail, retailers sought to differentiate what they were selling on the basis of 'quality'. Although all consumers would prefer better-quality food, control over the meanings of quality allows retailers to segment the market. The cultural meanings of quality are thus captured and translated into economic rent by those able to control these meanings (Goodman 2009).

Adherence to safety standards is one of the ways quality is defined. In South Africa, government regulation sets the baseline for considerations of food standards, essentially requiring that produce must be fit for human consumption (Louw et al. 2007). This is the case throughout the agro-food system. However, the state has a limited ability to monitor and enforce compliance, and corporate retailers have stepped into the gap to enforce compliance not only with the minimum standards but also with additional standards that they determine. So, for example, most major retailers now require EurepGAP standards at farm level and HACCP (Hazard Analysis and Critical Control Point) at pack-house/processing level from fresh produce suppliers (Bienabe & Vermeulen 2007). Under the umbrella of the Global Food Safety Initiative (GFSI), seven major South African retailers have come to a common acceptance of the four GFSI benchmarked food safety schemes: the British Retail Consortium Global Food Standard; the International Food

Standard; the Safe Quality Food Scheme (2000); and the Dutch HACCP Scheme (Option B). The International Committee of Food Retail Chains coordinates the GFSI (Popplewell 2009), showing greater international corporate co-ordination of standards. These standards raise barriers to entry for smaller producers because of the costs of compliance, and the need for economies of scale in monitoring and compliance in traceability and certification schemes.

Even then, the standards apply only to those who are able to meet corporate retailer requirements. Retailers have the power to enforce these rules, while the state lacks the same power to enforce even the minimum standards in the rest of the agro-food system. This generates a self-fulfilling prophecy, where food quality, safety standards and co-ordination capacity improve in the corporate chains while the 'unregulated' parts of the chain are left with variable quality and weakening governance systems as capacity is drawn into the corporate chains. This uneven distribution of power allows corporate retailers to make more inroads into the informal sector (Bienabe & Vermeulen 2007). This is not just a product of the idea of 'quality', but also the practical reality of improved value in consumers' own estimation.

Michael Pollan (2008) describes the significant negative health (and social) effects of the 'industrialisation of eating', which includes a simplification of food content and a move away from food culture to food science. The dominance of supermarkets embodies a shift to an industrialised food system, with ambiguous consequences for dietary quality – for example, a shift from a diet rich in a variety of foodstuffs (legumes, sorghum) to a simplified diet highly reliant on (poor quality) meat for protein and (nutritionally limited) maize for starch.

While industrial–corporate food production and distribution produces innovations and efficiencies that may be beneficial for consumers, the types of innovation and efficiency are bound up with attempts to create and capture added value. For example, information, design, branding, retailing, marketing and lending for consumption have become significant sources of value addition (Gibbon & Ponte 2005). These constitute barriers to entry which are used by lead agents to appropriate value in the chain (Gereffi 1999).

Wholesale and supply

Wholesale and supply refers to the procurement of fresh and processed food products from producers and their distribution to retailers and their individual stores. There is an overlap between processors and wholesalers. In the past, retailers relied on the producers (whether farmers or food manufacturers) to organise distribution. Over time, 'intermediaries' in the form of brokers stepped in to source products and supply retailers, resulting in some degree of consolidation and the creation of a 'first tier' of suppliers. An important source of fresh produce was the municipal fresh produce markets. Although retail stores tended to contract directly with producers, brokers relied heavily on the fresh produce markets. Farmers paid a 5% fee on sales to the municipalities for upkeep, administration and expansion of the markets. South Africa has 17 national fresh produce markets (NFPMs), with turnover concentrated in the big cities. Johannesburg, Tshwane, Cape Town and Durban recently held a 75% share of total NFPM turnover value (Louw et al. 2007:15). The produce markets' price-setting mechanism was and remains the benchmark for fresh produce marketed through other channels (Louw et al. 2007). These markets had credit facilities between agents and buyers, but they were open to abuse and the National Agricultural Marketing Council (2007) recommended that they be terminated.

The revolutionising of retail procurement logistics technology and inventory management dramatically reduced costs. This allowed corporate retail to expand into mass markets which in turn drove changes in procurement systems (Reardon et al. 2005). With the growth of supermarkets, the ability to handle large quantities of higher-quality produce and to distribute it 'just in time' to individual stores on request increased in importance. Supermarkets struggled to meet these goals through traditional procurement methods and channels, leading to four key pillars of a new procurement system: i) the use of dedicated procurement agents; ii) the use of preferred suppliers; iii) centralised procurement through distribution centres; and iv) the imposition of quality standards on suppliers and agricultural producers (Reardon 2006).

On this basis, dedicated procurement agents specialising in specific products and serving the supermarkets as their main clients are increasingly

preferred over traditional brokers and spot markets. They cut co-ordination and enforcement costs, and enforce private standards and contracts on behalf of the supermarkets (Reardon et al. 2005). In some cases this is done in-house, for example with the specialist sourcing companies Freshline (Spar) and Freshmark (Shoprite). But in other cases procurement is outsourced to dedicated wholesalers, with retailers using only one or two suppliers per category of product (Louw et al. 2007). Suppliers able to meet the retailers' product and delivery specifications and prices are listed to the exclusion of others (Mather & Kenny 2005). In recent years, retail procurement from NFPMs has declined to as little as 10% of total procurement, 'relating to lack of cold chain maintenance, inadequate traceability to the farm level and food safety issues' (Bienabe & Vermeulen 2007:3).

Centralised distribution centres under control of the retailers are short-term holding centres for rapid distribution of products following store orders. They have varying degrees of independence from retailers, but are mostly closely integrated with the retailing function (Louw et al. 2007). Suppliers are now regularly required to pay distribution allowances to the retailers, who then take up the distribution function for themselves (Bleby 2010d). Centralisation reduces co-ordination and other transaction costs, although it may increase transport costs, which are shifted onto suppliers (Reardon et al. 2005). Centralisation gives retailers more leverage because of their own economies of scale, which allows them to use distribution services as part of their entire business model, not purely for the agro-food chain. They can undercut smaller entities that are not tied into a larger corporate structure. This prompts consolidation in the supplier and retailer sectors through acquisition and conglomeration of smaller business units.

Changes in procurement are leading to concentration in procurement/supply, and are hastening integration between retailers and suppliers (Bleby 2010d). The extent to which retailers are gaining power in the chain as a result is disputed. There is evidence that retailers use the new procurement systems to extract greater value from suppliers, and transfer costs to them. Retailers squeeze suppliers through regularly negotiated discounts and rebates, charging suppliers extra for promotions, returning unsold products, delaying payment (a practice that has become a source of profit in its own right) and using own label branding to undercut processors (Mather 2005; Mather & Kenny 2005). In its global operations, Wal-Mart 'has consistently asked its vendors to lay out a plan that reduces costs by 10–12% a year, looking at the total system, not just within the (supplier) itself' – through a combination of sharing cost cuts, but also opening suppliers' businesses to scrutiny by a corporation (although they haven't been able to achieve this target to date in their supply chains) (Bleby 2010d: 11). However, according to Pick n Pay chairman Raymond Ackerman, retailers are not always entirely dominant in their relations with suppliers: 'For many of us, a very large percentage of all goods is sourced from a small number of large companies, most of them multinationals' (quoted in Bleby 2010b: 1). There is some evidence of multinational involvement in wholesaling, for example fruit exporters also procuring and selling into the local market to diversify their risk (Louw et al. 2007). Wal-Mart, rumoured to be on the verge of entering the South African market, has a supplier base in Stellenbosch, where it sources fresh produce for its global operations (Bleby 2010c).

Traceability and product segregation are core governance mechanisms that enable retailers to monitor a product from input supply to final consumer and to maintain control over quality (African Centre for Biosafety 2010). This includes not only suppliers, but also processors, primary producers and even input suppliers. For example, preferred supplier schemes 'always include regular engagement with farmers based on technical advice, training and specification' (Bienabe & Vermeulen 2007:3). There is a similar relationship between selected producers and retailers as there is between suppliers and retailers, with the selected producers' business activities being opened to increasing scrutiny by retailers. In Woolworths' Farming for the Future initiative, although the retailer does not prescribe precisely how to farm, 'what we want to know is the thinking behind their decision[s]…Why did they spray, at that time, in those crops, in that area? Did they take into account negative effects on the environment, and did the decision prove justified after they had done so?' (Kobus Pienaar, quoted in Sherry 2010b: 52). Decisions about which agrochemicals are used, or whether genetically modified (GM) seed is used, are also based on the private standards set by retailers. This is a double-edged sword. On the one hand, it has the potential to encourage socially and ecologically sustainable farming practices. On the

other hand, only selected producers are involved and it forces them to make investments on the basis of standards determined by corporate retailers. It widens the gap between those who are able to meet the standards and the costs associated with this and those who are not able to do so, based on technical definitions of quality standards.

Storage and processing

Storage, in particular of bulk durable commodities like grains, was historically the preserve of the co-ops. The corporatisation and conversion of the co-ops into private companies has resulted in the consolidation and concentration of storage facilities.[8] Afgri, Senwes and Noordwes, all regionally based former co-operatives, dominate storage in the grain value chain, holding 70% of domestic storage facilities between them. There are 220 depots on the Highveld, accounting for around 83% of capacity, and 46 in the Western Cape which account for less than 6% of total capacity (National Agricultural Marketing Council 2003:148; National Department of Agriculture 2006c). Profits of the three former co-ops were considered to be well above average rates for the industry in 2002 (Chabane 2002). Senwes and Afgri also accounted for more than 30% of grain traded in 2003/4, indicating a strong crossover between storage and trading. There are just four major grain traders on the South African Futures Exchange (Competition Commission 2008:29). The Competition Commission has suspicions that silo owners are using their economic strength to engage in unfair competition. In March 2010, the Commission announced an investigation into Afgri, Senwes, NWK, OVK, Suidwes, VKB and the Grain Silo Industry on possible collusion in setting silo tariffs (Senwes 2010). New technologies for on-farm storage, like silo bags, are making small inroads into storage. But given the link between corporate storage and processing and the economies of scale that make it impossible for processors to accept grain from individual farmers and pool it, adoption of these technologies will be limited to short-term on-farm storage. Even agricultural producers who are not producing for the market tend to take their produce to the corporate millers for milling and storage. They then collect the milled grain as and when they need it.

About 70% of agricultural output is used as intermediate products in manufacturing and related sectors (Louw et al. 2007:4). There were more than 2 200 companies involved in food and beverage manufacturing in 2003 (Vermeulen et al. 2008:200). But the food and food products sector is one of the most concentrated sectors in South African manufacturing. Between 1975 and 1996, the contribution to output of the top 5% of firms increased from 65% to 75%. The top 15% of firms had 90% of output in 1996 (Louw et al. 2007:14). A few large corporations dominate the South African food industry: National Brands, Pioneer Foods, Tiger Brands, Nestle SA. This concentration is a historical consequence of restricted licensing procedures and – in sectors not under the control of the boards – technical barriers to entry that limited the number of processors under the segregationist apartheid era (Mather 2005). Nevertheless, this concentration varies from commodity to commodity. In the 1990s, concentration was the highest in breakfast foods, starches and starch products; dairy products; and coffee, coffee substitutes and tea, where the top four companies held over 80% of the market share. On the other end of the spectrum, the top four companies in the meat, fish, fruit, vegetables, oils and fats categories had less than 20% market share (Mather 2005:611).

Deregulation and market liberalisation had contradictory effects. On the one hand, the number of food manufacturing companies increased (although unevenly and not in all sectors). On the other hand, the share of the market held by the major processors also increased as a result of mergers and acquisitions. In the grain milling sector, for example, while there are more than 190 maize millers (National Department of Agriculture 2006c:16), four firms control 73% of maize milling output (Cutts & Kirsten 2006:328). The dairy sector has seen both a decline in the number of primary producers and producer–distributors and an increase in the average size of dairy farms, processors and retailers since deregulation (Food Pricing Monitoring Committee 2004). The top five processors control 70% of fresh milk production (Mather & Kenny 2005:181). The top three poultry feed producers – Afgri, Epol and Meadow – control 75% of the market between them (National Agricultural Marketing Council & Commark Trust 2007:3). The list goes on. Focusing on individual commodities may lead one to underestimate the ownership and market share of conglomerates like Tiger Brands and Pioneer Foods, which operate and are dominant in more than one commodity chain.

8 Information in this paragraph was drawn from African Centre for Biosafety (2010).

Corporate food processors have used their market power to make windfall profits during periods of sharp food price hikes. According to economist Nazmeera Moola (2010: 12), Tiger Brands' grain division's second-half earnings in 2009 were up 45% 'due not to any particular management expertise but to its ability to keep prices high while inputs costs fell'. Integrated companies in both storage and processing are known to sell at higher prices to competitors in downstream activities. Mather (2005) indicates how small poultry processors felt they were not paying 'market prices' for feed because the largest broiler companies are also involved in feed manufacturing. In 2009, the Competition Tribunal found that Senwes was engaged in unfair pricing policies for storage that discouraged farmers from selling to traders competing with the Senwes trading arm (Competition Appeal Court 2009).

Foreign direct investment in processing since the 1990s has intensified competitive pressures in food processing and increased barriers to entry (Bayley 2000). Rising food imports are also a challenge to the sector, both for raw materials and processed products, allowing retailers to bypass local producers with goods that are often subsidised in their home countries. In the tomato subsector, for example, local producers are in direct competition with Chinese producers. In 2006, it cost Giant Foods in Limpopo just R250/ton to import tomatoes from China, compared with R750/ton paid to an existing network of local producers (Louw et al. 2007:47). Overall, the value of imported processed food products rose more than 6.5 times between 1995 and 2007, from R2.7 billion to R18.1 billion. Unprocessed food products also rose, though not as sharply, from R5.4 billion in 1995 to R12.5 billion in 2007 (National Department of Agriculture 2009:84). The value of processed imports has overtaken the value of processed exports; the balance of trade for processed goods is negative and declining (Sherry 2009).

As in retail, a focus on corporate processors tends to lead to less attention being paid to 'non-corporate' food processors. A small survey of small-scale processors found that more than 85% of the processors sold their products to independent (non-corporate) retailers (Mather 2005:613). Their inability to sell to corporate supermarkets is based on their inability to meet the volume and consistency of supply required by these retailers. However, the availability of other retailers and traders outside the corporate system means that the smaller processors may still have an outlet. There is potential to build these links. No detailed research on 'informal' food processing has been carried out in South Africa. Davies and Thurlow (2009:14) found that 'informal' food and beverage manufacturing constituted just 1.5% of national GDP from this sector, and 6.4% of employment in this sector, but still considered it a key informal manufacturing sector. According to Vink and van Rooyen (2009:18), an estimated 30% of the national maize crop is now milled by small-scale millers. Informal sector slaughtering of red meat and sale to end consumers either in raw or cooked form now forms 'a substantial proportion of total red meat sales' (Vink & van Rooyen 2009:18), although its precise magnitude is unknown. There has been a rapid increase in the number of small abattoirs that retail directly or sell direct to retailers, resulting in a crisis for the large-scale metropolitan abattoirs (Vink & van Rooyen 2009). In other African countries, a high portion of food expenditure in the poorest households is on street food and ready-prepared meals (Bricas & Broutin 2008). If we include home preparation of raw produce, and street vendors preparing and selling food, 'non-corporate' processing may encompass a relatively important part of food production. Processing doesn't have to be an industrial activity. If we think of the staple foods for the majority of the population – maize meal, vegetables and some meat (poultry or beef) – the requirements for industrial processing are not high. The key issue in these chains is the distribution of primary products from the agricultural producer.

Agricultural production

There is a missing middle in agricultural production in South Africa (Hall 2009). On the one side are approximately 40 000 large-scale, capital-intensive, mostly white commercial producers with established links to domestic and export corporate supply chains. On the other side are an estimated 1.3 million small-scale, labour-intensive, mostly black producers. They range from people producing food purely for household consumption to people producing agricultural commodities primarily for markets, with many mixing the two either through sale of surpluses after household use is taken care of, or through the production of food crops for household use and cash crops on the side for sale. Cousins (2009)

proposes that general reference to smallholders provides an insufficient basis for understanding the differentiation that exists among small-scale agricultural producers. He identifies six key categories which permit nuanced interventions in support of smallholder agriculture. The categories are supplementary food producers and allotment-holding wage workers, both of whom engage in some food production for household consumption with differing access to wage labour; worker-peasants who combine substantial agricultural production with wage labour; petty commodity producers for whom farming is the main source of income and who rely on a combination of own, family and hired labour; small-scale capitalist farmers who hire labour; and capitalists who farm but whose main income comes from elsewhere. It should be recognised that most of these categories are integrated into capitalist relations of production, whether directly in agriculture through input supply markets or sales of produce, or in the broader sense of being locked into a cash economy to meet at least some of their needs.

The large-scale commercial farming sector dominates production of agricultural commodities, both for the 'formal' and 'informal' segments of the agro-food system. The corporate segment of the agro-food system relies on a stable supply base of commercial farmers (Bienabe & Vermeulen 2007). Concentration in agricultural production has increased since deregulation and liberalisation. While the amount of land under agricultural production has remained constant across all sectors, the number of commercial farm units has dropped from 60 000 in the early 1990s to about 40 000, indicating a concentration of land ownership (National Department of Agriculture 2009:6; Statistics South Africa 2009:10). A small core of 6% of farm units produced 40% of total income in the mid-1980s (Cooper 1988:53). This concentration increased in the period after deregulation and liberalisation. In 2002, 673 farmers (about 1.6%) produced a third of gross farm income, and fewer than 2 500 (about 6%) produced more than half of gross income (Sherry 2010a: 47). In the red meat sector, although small farmers held between 30% and 40% of the national herd in the early parts of this decade, a small number of large-scale feedlots account for up to 60% of the total number of animals slaughtered each year (Food Pricing Monitoring Committee 2004:173, 175). In sugar, the trend has been for the minimum-sized unit on which commercial farmers can make a living to increase (Cartwright et al. 2005). Although the industry boasts 51 000 small-scale African growers, these contract farmers only contribute around 15–17% of harvested cane. Most of these cane growers are men. A comparatively small number (around 2 000) of large-scale growers accounted for over 70% of total cane harvested at the start of this decade (Maloa 2001:2). In the dairy sector, liberalisation brought consolidation in agricultural production, with the top 5% of producers accounting for 24% of production in 2001, compared with 10% in 1995. This is partly the result of processors forcing prices down, stimulating consolidation of production units (Mather & Kenny 2005). Apart from dominating the corporate supply chain, these large-scale commercial producers also have a direct impact on 'non-corporate' food markets through sales of produce onto fresh produce markets (both regional and local) or into smaller channels of distribution in the form of direct sales. Small producers are thereby forced into direct competition with the large-scale commercial producers, even when they are not involved in value chains that end with corporate retailers. Transaction costs in supply chains favour larger farms, small producers are often constrained from making the necessary investments to participate in the supply chain, and small farms require more assistance than larger farms per unit of output (Swinnen 2007). However, small farms pose fewer problems for the contracting company in contract enforcement, and may have cost advantages over larger farms (Swinnen 2007).

Employment on large commercial farms has dropped substantially over the past decade as producers have consolidated and sought to cut costs, and responded to legislation to secure tenure and institute minimum wages. From a peak of over 1.6 million workers (permanent and temporary) in 1970, the number of workers had declined to 600 000 by 2005 (National Department of Agriculture 2009:4). According to the 2007 Agricultural Survey, there were 432 000 full-time workers and 365 000 seasonal workers in that year (Statistics South Africa 2009:5). Key shifts in the labour market include substitution of permanent labour with temporary and casual labour, increased use of labour contracting, and an increase in the number of female farm workers (but in less secure forms of employment) (Vink & van Rooyen 2009). Very little systematic work has been done on the conditions of labourers on small-scale farms. One view is that the exploitation of household (mainly women and child)

labour and the underpayment of wage labour underpin the better per hectare productivity of smallholder farming. No full survey has been conducted, but anecdotal evidence, or evidence from research in specific localities, indicates that agricultural workers on small-scale farms are often not paid or otherwise paid very poorly – certainly below the minimum wage – and conditions are not regulated by the state.[9]

Despite their marginality to the corporate system, smallholders play a minor but important role in the overall food system. Just 3.7% of the income of small-scale non-metropolitan households with access to land comes from sales of agricultural produce (Vink & van Rooyen 2009:14). However, 78% engage in agricultural production as an extra source of food for the household and another 8% have agricultural production as their main source of household food (Vink & van Rooyen 2009:15). These producers could form a potential platform for an entirely different structure of agricultural production. In conditions of high, structural unemployment, supporting and extending this production base may produce favourable results. The government is reorienting towards smallholders, in rhetoric if not practice, following the ANC's Polokwane conference resolutions in 2007. These resolutions not only moved rural development and agrarian reform higher up the agenda, but also shifted the agricultural focus to smallholders (African National Congress 2007). The subsequent Comprehensive Rural Development Programme identified categories similar to those proposed by Cousins (2009) above, but hasn't yet made it clear which are the priority groups for support. Resources to realise the shift in practice are also severely constrained. Smallholder producers – especially new entrants – are forced to compete with well-entrenched large-scale commercial producers, with limited external support. The land reform programme (through LRAD, or Land Reform for Agricultural Development) is lagging behind the more recent developments, still emphasising the transfer of large-scale commercial farms to individuals or households. There is no indication yet from government that it will move in the direction of subdividing large farms once they have been redistributed. So far, talk is limited to individual ownership of production units and a land ceiling set high. Despite the land reform programme, there is a strong indication that access to land for farming is declining. Between 2002 and 2006, the number of households in South Africa with access to land for farming declined by 21%. In relative terms, the number of households with land access fell from 15.7% of all households to 10.7%, with the largest loss experienced by those with the smallest parcels of land (Vink & van Rooyen 2009:14). Change in ownership, both of land and business, is an important factor in shifting power in the agro-food system.

Contract farming is a key part of the agro-food system. This is not limited to smallholder contract 'schemes', and includes large-scale commercial producers. The relationship between agents in industrial–corporate chains is increasingly through contract agreements and rarely involves open market transactions (Mather 2005). Vermeulen et al. (2008) show how procurement through contracts is common between retailers and producers as well as processors and producers in fresh fruit and vegetables; potatoes, maize and peanuts for the snack industry; eggs, poultry and meat; and tobacco, sugar cane, cotton and timber. Contracts vary from one-year production agreements to ten-year agreements (2008:208–9). Retailers prefer to contract with those who are able to meet their quality standards with consistency of supply and at required volumes (Reardon 2006), the latter of which raises barriers to entry for small-scale producers regardless of how efficient they are.

It is difficult for smallholders to compete with large-scale commercial producers, especially in staple crops like grains where economies of scale are significant. One result is an orientation to high-value niche products, such as fresh fruit and vegetables or organic or Fair Trade products which trade at a premium. Contract schemes organised through centralised processing units – especially in cotton, poultry, tobacco, timber and sugar cane – are a way of organising the involvement of smallholders into corporate value chains. Some of them were previously state run but others, such as sugar, were always co-ordinated by the private sector. Given global competition, the production of some of these crops, for example cotton, is in long-term decline. Smallholder contract farming for corporate processors is not always beneficial to the producers. The contracted grower lends to the production process labour power and the property within their possession (Watts 1994b). 'The peasant "content" of contracting cannot…be taken for granted, since the smallholder may, in some cases, be little more than a rhetorical device to legitimate large-scale…investment'

9 Data forthcoming from a PLAAS study of livelihoods after land reform conducted by Aliber, Greenberg and others in Limpopo in 2008/9, as an example.

(Watts 1994b:57) for the purposes of capital accumulation. The contract allows capital to locate sources of accumulation without directly taking hold of the point of agricultural production, distributing the production risks to direct producers but controlling the process through appropriation (Watts 1994a). Concretely, contract farming for resource-poor small-scale farmers is often accompanied by decreased food production and an increase in food insecurity as a result of concentration on contract crops (Kirsten & Sartorius 2002). Small-scale contract farmers may also find it difficult to make any income from agriculture, even in comparatively wealthy sectors such as sugar. As an example, a third of small-scale contract cane growers did not make any returns in the 2004 season (Cartwright et al. 2005:22).

Input supply

Transnational companies dominate input supply. The chain connects to the minerals-energy complex through agrochemicals and, increasingly, seed (mixed local companies and transnationals) and machinery and equipment manufacture (mainly transnational, indicating the historical weakness of South Africa's capital equipment manufacturing sector). Expenditure on fuel rose steeply from around R5–6 billion in 2005–7 to more than R13 billion in 2008. Fertiliser prices also rose dramatically from around R3 billion in 2005 to over R8 billion in 2008 (National Department of Agriculture 2008:5). More than R7.5 billion was spent on machinery and implements in 2008, up from R3.5 billion in 2005 (National Department of Agriculture 2008:8). These sharp increases show both the rapid growth in agricultural commodity prices over that period, which led farmers to expand their asset base, but also the sharp increase in the costs of oil-based products. South Africa's high level of imports of agricultural inputs exposes producers to sharp fluctuations in price and to price rises as the production of raw materials cannot keep pace with rapid economic growth.

Following deregulation, the South African fertiliser industry was rationalised and there was a shift to imports of raw materials (African Centre for Biosafety 2009). Two local producers and one multinational dominate the supply of intermediate and final products to the market. A high level of concentration in the fertiliser production industry has led to anticompetitive behaviour. In 2009, the Competition Tribunal found Sasol, Omnia and Yara/Kynoch guilty of cartel conduct in the supply of nitrogenous fertiliser, and Sasol and Foskor guilty of cartel conduct in the supply of phosphoric acid. Sasol had to pay a fine of R250 million (Competition Tribunal 2009). Foskor, which produces phosphoric acid, a key ingredient in fertiliser, was found to have contravened the Competition Act by entering into a 'toll production' agreement with Sasol which constituted a division of markets between the two (Njobeni 2010).

The agrochemical and seed sectors are also concentrated, especially in some key crops (for example, maize and wheat). All the big global biotech seed companies are deeply involved in the agrochemical sector. Bayer tops the list, followed by Dow, Sygenta, BASF, Monsanto and Du Pont (African Centre for Biosafety 2009:52). In the seed sector, Pannar (a company with South African origins and now a target for takeover by Du Pont-Pioneer Hi-Bred) and Monsanto hold 32% of registered seed cultivars between them (African Centre for Biosafety 2009:45). The parastatal Agricultural Research Council (ARC) holds 8.6%. The top ten companies control more than two-thirds of registered varieties (African Centre for Biosafety 2009:42). Pannar, Monsanto, Du Pont-Pioneer and Afgri (also local, emerging from the old Oos-Transvaal Ko-op in Mpumalanga) dominate GM seed varieties. GM seeds dominate seed use in the maize sector: 56% of the total area planted to white maize and 72% of yellow maize were GM seed varieties in 2008 (Nel 2009; Sansor 2009:11). Other than that, GM seed is restricted to two small commodity sectors, cotton and soya.

A large number of non-GM varieties still exist for the crops for which GM varieties are also available. Although there are more hybrid varieties in maize, sunflower and grain sorghum, open pollinated varieties (OPVs) are dominant in all other crops. These seed varieties are available even if they are not the most commercially used varieties. Production of certified seed is outsourced, with larger farmers producing hybrid seed and smaller farmers producing OPVs (African Centre for Biosafety 2009). On-farm seed saving is another option that is practised where OPVs are used. With hybrids and GM seeds, loss of vigour and legal prohibition limit on-farm saving. As a result, as the corporate sector expands, opportunities for the diverse production of seed diminish. However, the combination of OPVs produced commercially by smallholder farmers or, alternatively, saved on the farm by producers

for re-use signals a potential point of intervention for more ecologically sustainable seed production, as well as a potentially larger role for smallholder farmers in producing seed. Coupled with the ARC's important public ownership of many seed varieties, there is a good possibility for public action to strengthen non-corporate seed production.

State-run extension services are very thin on the ground, and staff are poorly trained. Extension workers tend to be accountable to private or public bureaucracies. A solution proposed by government and large-scale agribusiness is to have farmers pay for extension services and to encourage competition between extension workers for business – in essence, to privatise the service. In practice, this has reproduced a dual system where those who can afford extension services have a strong and accountable service (driven by money), and those who cannot afford it have no service or a very poor public service. It is the same reproduction that cuts across all facets of the South African economy and society, whether it is education, security, water and electricity access or food provisioning. The model reproduces this split between an elite minority and an impoverished majority.

The 'market' has stepped in only where it is profitable, for example in fresh produce, or only in segments of chains, as in poultry contract production where selected producers are given both state and corporate support to produce for a corporate processor to the exclusion of others. Even public extension workers often end up being transmission agents for corporate seed and agrochemical companies. Corporations provide 'training' to extension officers in the use of their products and then use government extension workers to go out and sell their products. A radical retooling of extension services is required, including a transformed curriculum that enables them to provide technical advice based on sound ecological practices (that is, using natural resources renewably). In addition, connections between producers and resources/support need to be facilitated, as does the organisation of producers. This may be a tall order in the context of the limited priority in government budgets for agricultural support.

State interventions in the governance structure

Arguably, the conditions for heterarchic forms of governance are not sufficiently developed in South Africa to allow for 'inter-systemic steering' to transcend market and hierarchical forms of governance. There are high levels of distrust between government and corporations, and these often have racial overtones. The state has ceded a lot of ground to private control through the processes of deregulation and liberalisation initiated in the 1970s, with the restructuring reaching its apex with the passing of the Marketing of Agricultural Products Act in 1996. But the state has also imposed new regulations that rely quite heavily on self-regulation by private agents. The weakness of the state manifests in its inability to realise some of its policies, especially its inability to monitor and enforce compliance. At the same time, state regulations underpin private co-ordination and governance of value chains. Below, four areas of 'meta-governance' are considered: consumer protection, labour regulations, competition policy, and Agricultural Black Economic Empowerment (AgriBEE). Each of these shapes the boundaries within with private actors can self-regulate.

The government is interlocked with corporate capital in another sense. Eighty-nine percent of the Public Investment Corporation's (PIC's) investment capital is held on behalf of the Government Employees Pension Fund. It holds significant shares in companies throughout the agro-food system (Table 1). This certainly makes it more difficult for government to consider a radical transformation of the agro-food system that would reduce corporate value and profitability. Government has chosen which investments to make. In the 1990s, the idea of prescribed assets was floated, which would require a portion of all investments to be made in social infrastructure. There is still a return, but it might not necessarily be as high as returns from the most profitable corporate enterprises. The Congress of South African Trade Unions (COSATU 2010) raised the idea again in its draft policies on a new growth path.

Consumer protection

Focusing as it does on the structural functioning of commodity chains, the value chain approach tends to downplay the role of individual actors or their existence as active agents who shape their reality, even if this is in conditions not of their own choosing. This includes the structure and functioning of commodity chains which, if broken down, can be seen as a series of social interactions with real people involved. Although these actors are constrained by past structure, they simultaneously reproduce and alter that structure every day in their social interactions. There is always space for change. Yet 'consumers emerge as private, atomistic and passive rather than being "eminently social, relational and ac-

Table 1: Selected PIC investments in agro-food corporations, 2009

Corporation	% share
Sasol	18.43
Tiger Foods	14.69
Woolworths Holdings	13.96
Spar	13.6
Shoprite Holdings	12.32
Massmart	11.35
Astral Foods	11.12
Pick n Pay	8.8

Sources: Pick n Pay (2009), Public Investment Corporation (2009:80)

tive"' (Goodman 2009:17, paraphrasing Appadurai). This goes not only for consumers but for active human agents throughout the agro-food system (which includes everyone, because everybody needs food to survive). In their everyday activities, people construct the 'fetishised' (unacknowledged, given a permanent status even if they are transitory) commodity relationships and their meanings. Breaking this 'commodity dream' requires conscious, collective activity.

Across the board, consumers are poorly organised to represent their own interests as consumers of food products. There are some NGO consumer protection bodies like the South African National Consumers Union and the National Consumer Forum, but they operate without an organised mass constituency. The government is well aware of the weakness of consumers and has put some far-reaching policies and laws in place although, as with other laws and policies, its capacity for monitoring and enforcement is questionable. Part of the problem is that enforcement of consumer rights is scattered across numerous regulatory agencies and systems, with limited co-ordination.

The most recent law is the Consumer Protection Act No. 68 of 2008 (CPA), passed by the Presidency, which came into force in October 2010. The Act creates a number of consumer rights and establishes a National Consumer Commission to investigate and rule on consumer complaints based on these rights. Section 61.1 of the Act places liability on producers, importers, distributors and retailers for: a) supplying any unsafe goods; b) defects or hazards in any goods; c) inadequate warnings provided to the consumer pertaining to hazards arising from or associated with the use of any goods.[10] Consumers will be able to claim compensation for harm suffered in respect of any such goods supplied after 24 April 2010 if they can prove that the supplier supplied the goods to them and that they suffered harm as a result of using the goods. This means all actors in the value chain can be held liable. Suppliers will not be able to contract out of product liability any more (McGee 2010). Retailers must deal with consumer complaints and will not be permitted to refer the consumer to suppliers (Luterek 2009). Nevertheless, this liability is limited in section 61(4)(c), which says liability does not arise if 'it is unreasonable to expect the distributor or retailer to have discovered the unsafe product characteristic, failure, defect or hazard, having regard to that person's role in marketing the goods to consumers'. This means consumers will probably have to make claims against manufacturers or importers rather than retailers or distributors, unless product testing was possible at the retail level (Woker 2009).

The terms of the CPA potentially impose the necessity of product segregation in the value chain for GM crops in South Africa (maize, soya, cotton), but especially maize and soya since they mainly go into the human food supply. Costs of segregation and identity preservation are unevenly distributed across the chain and may force changes in supply chain structure, including smaller, more decentralised storage and grain handling facilities. There are low premiums for non-GM maize and soya although there is a niche market of high-premium products. Product segregation requires mandatory labelling and monitoring, which are not yet in place but could potentially be included into CPA regulations due to be passed shortly early 2011. This has implications for retailers in supply chain governance and brings product traceability into the mainstream (African Centre for Biosafety 2010).

Labour regulations

Labour regulations throughout the chain have had uneven effects. They are also unevenly monitored and enforced. The Labour Relations Act and the Basic Conditions of Employment Act are applicable throughout the chain, and minimum wages are in place in some parts of the chain. In agriculture, the average wage for all workers (including white collar workers, who are paid far more than blue collar workers in this sector) was just slightly higher than the minimum wage in 2007. The minimum wage currently stands at R1 232/month for permanent workers. National statistics on farm wages are very weak. They are gathered too seldom, are not disaggregated enough, and rely on voluntary returns for their information. The latest Agricultural Census (Statistics South Africa 2009:19) shows that full-time workers earned an average wage of R1 384.83/month in 2007. This was down from R1 500.32 in 2005 (Statistics South Africa 2006: 10). Casual and seasonal workers earned an average of R328.15/month (with seasonality taken into account) from farm work in 2007, compared with R354.56/month in 2005. Conditions vary according to the size of the production unit, with bigger units tending towards better conditions.

10 This section was drawn from African Centre for Biosafety (2010).

Casualisation and outsourcing, as noted above, are key trends. Unionisation is very low, with small pockets of independent organisation. The Food and Allied Workers' Union (FAWU) organises mainly on corporate or state-owned farms that are closely integrated with processing, such as timber or sugar cane.

In retail, the historically strong South African Commercial, Catering and Allied Workers' Union (SACCAWU) has some level of organisation, but is battling to deal with high levels of casualisation and subcontracting of workers (Kenny 2001). In processing/manufacturing, FAWU organises at one of labour's stronger points in the agro-food system, with an emphasis on larger corporate entities. However, jobs in some sectors such as canning were destroyed with trade liberalisation. Both FAWU and SACCAWU are COSATU affiliates. FAWU has called for the speeding up of land redistribution and agrarian reform, which signals that the union is beginning to think about the food system more broadly. Anti-union practices (including subcontracting, outsourcing and labour broking) are quite widespread, even at the corporate retail level. Wal-Mart – possibly to enter the South African retail market shortly – has a reputation for being anti-union (Bleby 2010c).

Initiatives such as the Ethical Trading Initiative and Fairtrade seek to secure compliance with minimum labour legislation, which is a form of securing a portion of value for workers that they might not otherwise get, mainly in export products going to European supermarkets. They focus on enforcing international or national labour standards in the production process, and on ecologically sustainable production techniques. However, they fail to deal with the low prices supermarkets offer, and hence transfer added costs to suppliers and others upstream (du Toit 2009). Pick n Pay is seeking to establish a Fairtrade market in South Africa, and claims that 16 000 farm workers and small-scale farmers benefited from the introduction of Fairtrade products in its stores in 2009 (Bleby 2010a: 2).

Regulation of competition

The Competition Commission has played a very important role in raising awareness of the governance and functioning of agro-food supply chains. Together with the National Agricultural Marketing Council, they have put together an impressive list of detailed investigations and reports. They are both government institutions. The Competition Commission has some teeth. It recently imposed a R196 million fine on Pioneer for its role in a bread cartel, and was taking forward action to make the fine a percentage of the whole group's turnover rather than just the food division's. This would amount to R1.6 billion (Mathe 2010: 11). Hot on the heels of fines for price fixing in bread manufacturing, the Commission is investigating Pioneer Foods, Foodcorp (trading as Ruto Mills), Godrich Milling, Premier Foods and Tiger Brands for colluding to establish a mechanism for fixing prices and dividing the market between them (Mathe 2010). In 2009, the Competition Tribunal found Sasol, Omnia and Yara/Kynoch guilty of cartel conduct in the supply of nitrogenous fertiliser, and Sasol and Foskor guilty of cartel conduct in the supply of phosphoric acid. Sasol had to pay a fine of R250 million (Competition Tribunal 2009: 13). It was also ordered to divest from some of its fertiliser assets (Gedye 2010).

Competition policy does constrain some private sector efforts at self-interested chain governance. For example, in the Sasol case, it was considered collusion for companies to sit together in committees to:

> *co-ordinate business practices and goals; exchange information about production, supply and demand; allocate, redistribute and swop sales by reference to sales targets, prevailing market shares and product availability; and agree on export volumes and prices, directly or indirectly fixing prices; dividing markets by allocating customers, suppliers or specific types of goods (*Competition Tribunal 2009:6*).*

However, charging high prices is not enough to put competition authorities on the alert. Only if a monopoly engages in predatory or exclusionary behaviour does this become an issue (Goldsmith 2001). But the South African Commission is making an active intervention in the market, in the same way as the PIC recently embraced shareholder activism to shake up corporate governance, with some success. PIC is the largest holder of capital in the country, a mix of shares bought with pension funds. It has certainly stepped back from its overtly interventionist role in the past year or so – in the same time frames as the Zuma administration came in. So there

are mixed signals from the central state about levels of intervention in corporate structure. This brings us to AgriBEE, which has a far more explicitly transformative role than the Competition Commission.

AgriBEE

The AgriBEE framework was released in 2004, and a sector charter gazetted in 2008, to increase the involvement of the under-represented in agriculture in the corporate commodity chain, from input supply to processing (National Department of Agriculture 2006a). For its purposes, then, retail is treated separately. The Charter identifies seven areas of empowerment: ownership; management control; employment equity; skills development; preferential procurement; enterprise development; and rural development, poverty alleviation and corporate social investment (National Department of Agriculture 2006a). The AgriBEE scorecard establishes a number of specific targets, for example 25% of equity ownership; 40% participation in senior top management; 2% of leviable amount spent on skills development; 1.5% spent on corporate social investment (National Department of Agriculture 2006b).

Practical bases for transforming the agro-food system

A survey conducted by the Agricultural Business Chamber and the Industrial Development Corporation (an investment parastatal) showed that respondents to the survey have focused their efforts on the socio-economic and skills development aspects of BEE. Similar results on priority areas were found in a survey of the dairy industry in the Western and Eastern Cape (Business Report 2008). These are more related to improving workers' conditions and skill levels. Specific measures are put in place in the scorecard (National Department of Agriculture 2006b). It is hard to tell whether there are guidelines beyond the scorecard, or if a transparent and credible process of verification is in place or is being built. For example, measuring skills development progress on the basis of the quantifiable measure of '2% of leviable amount spent on skills development' ignores the major bureaucratic snarl-ups in setting up a network of approved skills providers. Because of the general lack of certain corporate-specific skills in the society, skills providers are not likely to be in any better shape – and that means importing skills in corporate production techniques. Only some of the bigger entities will take seriously the need for a change in the racial composition of ownership.

The primary incentive for private companies to abide by the AgriBEE Charter is preferential procurement, with the state using its power as a purchaser of goods and services to promote BEE. Thus, in input supply, agricultural production and food processing, BEE is an example of a case where the state is using its institutional power to attempt to intervene to strengthen non-corporate actors in agro-food chains at the expense of corporations that are not compliant. Some large companies recognise this and have made changes in the racial composition of ownership. Examples of the BEE deals that have taken place in agriculture are the R323 million transfer of Boschendal wine estate, Phetego Investments' 25.1% acquisition in KWV, the sale of a 15% stake in Distell's South African Distilleries and Wines to a BEE consortium, the R502 million sale of a 26.77% stake in Afgri Operations to Agri Sizwe Empowerment Trust (which was opposed by FAWU for its unequal distribution of benefits), Country Foods' sale of 4% of shares to Kagiso Trust for R5.5 million, and the acquisition of a 30% stake in exporter Afrifresh Group by Vuwa Investments (headed by Bulelani Ngcuka). Contract farming with black smallholders is also being presented as an economic empowerment model in the poultry, sugar and other sectors.

The agro-food system has been restructured but these changes have not led to significantly greater diversity anywhere along the chain. Corporate control has strengthened and there is increased concentration of corporate ownership. Support to black and smaller enterprises to enable them to break into industrial value chains has been sporadic. The Congress Alliance has placed renewed emphasis on questions of transformation of agro-food value chains in recent years, although this has not yet translated into a fundamental shift in their orientation towards agriculture and transformation of the agro-food system. The ANC's Polokwane resolutions recognised that concentration and vertical integration in the value chain limit the space for smallholders to participate in the market. The ANC proposed 'to integrate small holders into formal value chains and link them with markets' (African National Congress 2007: page). However, the proposals are silent on the details on how this might happen. Linking smallholder farmers into existing industrial commodity chains may offer some advantages for individuals (depending on how it is structured), but it doesn't alter the broader relations of power in the agro-food system as a whole. From what can be seen in practice, the scale remains at the level of small pilots or boutique projects rather than a mass-scale reorientation.

The ANC government has passed legislation supporting co-operatives as a key organisational form to realise the integration of smallholders

into industrial commodity chains. The AgriBEE framework extends to beneficiation, storage, distribution and trading of agricultural commodities (National Department of Agriculture 2006a). COSATU (2010) has also called for support to co-ops throughout the agro-food chain. The government has put some effort into building co-ops in the agricultural sector in the past few years. Primary co-ops in agricultural production have grouped individuals together to work collectively on commodity production. Secondary co-ops concentrate on downstream intermediation, mainly to facilitate access to markets and to collective processing facilities. Sometimes processing may be run by parastatals such as ARC, but at other times the co-ops help to facilitate access into corporate markets. On the input supply end, the emphasis is less on co-ops and more on constructing state-driven facilities for renting equipment. This is still at the planning stage in many places. Co-ops can enable small-scale producers to get input discounts on the basis of economies of scale, or find ways into industrial value chains (supermarkets or processing facilities) by pooling their produce – but even in COSATU, thinking has not gone beyond this (see COSATU 2010). However, these efforts are constrained by the overall market dominance of large-scale commercial producers in agro-food chains. As a result, co-ops are unable to respond effectively to the concentration of control in the value chain either upstream or downstream of production.

COSATU (2010) has proposed far greater state intervention in the agro-food system, including developing industrial policy that orients towards producing capital goods for agricultural production and processing, regulating food prices, maintaining grain stocks, zero rating staple foods, restricting speculative activity on food and establishing state-owned food processing, procurement and distribution enterprises across food chains. It is worth considering the direction COSATU proposes, since it has the greatest capacity of any organised formation in South Africa to mobilise masses of people in support of its demands. However, COSATU's policy proposals essentially constitute a long wish list with almost no concrete proposals about how this will be achieved or who is going to do it.

The South African Communist Party has also weighed in on farm workers and land and agrarian reform in recent years (Nzimande 2004a, b). A small group of land rights NGOs has also built links with small farmer groups to try to develop an agenda based on ecologically and socially sustainable agriculture. However, not much thinking has been done about broader transformation in the agro-food system or in specific commodity chains. Of course, this can't all happen at once, especially if the process is being driven by small farmer groups who are still struggling to make productive use of the land.

Possible points of intervention

Overall, none of the practical activities that seek to transform agro-food systems engage with the idea of value chain governance, or currently perceive it as a useful entry point into transformation. This may be because it is not an issue presently confronting them and their constituencies. Some corporations, especially in retail, may be trying to improve certain aspects of governance. This is generally being considered as part of their ongoing pursuit to improve efficiencies, thus creating added value which they will seek to secure for themselves as far as possible. It thus appears that there are no social forces currently capable of and willing to transform agro-food systems by engaging with their forms of governance.

However, if we took as our starting point the idea of a campaign in one particular commodity chain in South Africa, we might be able to lay out a series of questions that could flesh out the content of such a campaign. Let's consider either the wheat to bread chain or the maize chain or possibly poultry, since these are probably the most important commodity chains for the poor in South Africa. Such a campaign could involve a range of different actors: government departments, farmer organisations, the Competition Commission, trade unions, NGOs and even corporations. We can travel through the value chain, stopping at each point of value addition and asking questions that a campaign would seek to respond to. Let's start at input supply: what opportunities are there to use OPV seeds owned by public institutions? Can smallholder farmers be involved in producing these seeds within the formal certification system? Are there smallholders who are interested in doing this? What resources would they require to allow them to produce at the appropriate quality standards? What is the possibility of acquiring these resources, even on a 'pilot' scale to begin with (for example, irrigation or extension services)? How could these farmers be organised to interact with public seed-holding institutions like the ARC? What are the possibilities of producing quality certified seed in an ecologically sustainable way? What kind of collective arrangements can be made to enable the seed producers to acquire other necessary inputs at the most favourable prices? What kind of relationship can be established between land owners and workers on the land that allows for an equitable sharing of benefits from the enterprise?

Once the seed is produced and supplied to the farmers who will grow it, a similar set of questions will be asked. With regard to linking smallholder producers to agro-processing, what are the possibilities of localising storage and processing? Are there activities already happening in the locality in this regard, and what would be required to scale them up? If there are no local processing activities, is there an interest among individuals or groups to do this? What role would there be for government, CSI, and inhabitants of that locality in establishing and running such an enterprise? What are the possibilities of farmers co-operating to establish facilities under their own control? How can labour conditions in agro-processing be improved, and will the enterprise be economically feasible? If not, what would be required for farmers to take their produce to existing storage and processing facilities? What organisational forms might allow them to secure the best prices for their products?

What physical markets exist locally for the sale of food products? How can these markets be supported to improve the quality of their service to buyers, including food safety and environmental health? Jayne (2008) has proposed that these might include decongestion, sanitation, safety and the provision of infrastructure such as loading points. What do stall holders or sellers require to improve their working conditions? What resources can be tapped into to realise these? If local markets are inappropriate channels for the distribution of the products, what do producers need to do to gain access to general dealers or supermarkets? What changes might be made in supermarkets' procurement policies to enable access for smallholder farmers and food processors? What government procurement schemes exist in the area, for example school feeding schemes, or provisions for

hospitals or military barracks? Is there room for negotiation to enable smallholders to provide at least part of the food requirements for these conduits? Does AgriBEE provide an opportunity to adapt government's food procurement strategies in support of its broader objectives? What organisational forms would be most appropriate for this?

This list of questions indicates the numerous points at which interventions can be made. They will be most effective if they are done in combination, thus revealing the complexity of realising change in the agro-food system. It is possible to try to answer each of these by suggesting what could or should be done in each instance. Specific circumstances will determine the interventions that are appropriate.

From a governance point of view, this poses difficult questions. Since the state and corporations are both involved in different aspects of chain governance, and since these aspects differ from commodity to commodity, there can be no overarching recommendations about how governance should be adjusted to orient industrial commodity chains in the interests of the poor. Although the state has produced laws and policies that establish boundaries within which private regulation and action can take place, it does not have the capacity to monitor or enforce most of these laws. The private sector is able to perform some regulatory functions of its own, but mainly in its own interest. Focusing on practical activity in a particular commodity chain, and drawing in those who are necessary for the process, as well as those who are able to make a contribution, may widen the scope of those involved in governance. In this process, interventions that are currently piecemeal (like creating producer co-ops without considering how they link to processes elsewhere in the commodity chain) might become more integrated. Different actors can take responsibility for segments of the process, although some overall co-ordination will be required. Who can and will provide that remains an open question.

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