
Smallholders and agro-food value chains in South Africa

Emerging practices, emerging challenges



Edited by Stephen Greenberg



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Institute for Poverty, Land and Agrarian Studies

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Published by the Institute for Poverty, Land and Agrarian Studies, School of Government,
Faculty of Economic and Management Sciences, University of the Western Cape,
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Website: www.plaas.org.za

ISBN: 978-0-86808-741-2

January 2013

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Editor: Stephen Greenberg

Copy editor: Kathleen Wood

Proof reading: Claudia dos Santos/Bushbaby Editorial Services

Cover photo: Susanne Feldt/Abalimi Bezekhaya, www.abalimi.org.za

Illustration: Katerina Sonntagova/Design for development

Layout: Design for development, www.d4d.co.za

Print: RNK Graphics

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Introduction: Smallholders and value chain integration in South Africa

Stephen Greenberg



A key emerging strand in the development of smallholder agriculture in South Africa is the effort to integrate smallholders into corporate food retail value chains. In this, the private sector and government have a common agenda, which is to build a commercial smallholder class that does not require ongoing financial support for survival, but which is able to stand on its own feet and compete in the market. Both government and the private sector recognise the need for some kind of 'start-up' support, and Walmart-Massmart's recently announced supplier fund will put pressure on other food retailers to deepen their own activities in this regard.

In many cases, integration of smallholders into corporate value chains can make profitable economic sense. The sugar, poultry, cotton, tobacco and forestry sectors have been doing this for a long time already, without any government compulsion. The arena opening up now is the small-scale production and delivery of fresh fruit and vegetables to supermarkets. These new opportunities have emerged as a result of the expansion of supermarkets into more distant rural areas, previously only served by informal markets, and government black economic empowerment (BEE) procurement policies have added to the logic.

Many 'development' voices argue that incomes for producers will increase if they can meet the conditions for entry into corporate value chains, which will have a positive impact on livelihoods (e.g. Brown and Sander 2007; Seville et al 2011). The argument therefore is that resources should be used to facilitate this entry. This simple narrative has been challenged on the basis that not all smallholders can enter these chains because of a lack of resources, high transaction costs, or biases against smallholder production in policy and in corporate procurement practices. Others refer to 'adverse incorporation' (Hickey and du Toit 2007) to indicate that even where smallholders might get a foothold into these value chains, they do not always benefit because power relations are skewed against producers in the buyer-driven chains that characterise most food products. Others suggest that local food economies and so-called 'informal' systems of production and distribution establish a basis for an alternative that is less resource intensive, more beneficial to producers and which has a higher likelihood of making food more accessible to the poor (e.g. the food sovereignty and agro-ecological movements).

The papers in this publication come out of a workshop hosted by the Institute for Poverty, Land and Agrarian Studies (PLAAS) in Johannesburg in November 2011. The workshop brought together academics, government officials, a few representatives from black smallholder farmers and the private sector, and generated a number of case studies on efforts to integrate smallholders into formal or corporate value chains. A selection of these is included in this publication. They focus on private sector initiatives and raise key issues around who smallholders are and what strategies can best be employed to build a layer of productive smallholders in South Africa.

Defining smallholders

In 2009 the African National Congress (ANC) identified rural development as one of its five priorities for South Africa. To some extent breaking with the past, agricultural production was placed at the centre of such a strategy, displacing the welfarist development strategies that had characterised rural development since 1994, and which had failed to make any significant inroads into rural poverty apart from the extension of social grants.

As a result, the idea of smallholder production in South Africa was given a new lease of life after 2009. The ANC's 1994 election platform, the Reconstruction and

Development Programme (RDP), referred to a shift from "the inefficient, debt-ridden, ecologically-damaging and white-dominated large farm sector to... a more sustainable agricultural system" without defining what the latter meant. Further down, the document went on to propose the government should support "part-time activities, including small-scale farming, which can increase productivity, incomes and household food security" (ANC 1994: 84). In practice this commitment dissolved as agricultural budgets were slashed in efforts to stabilise the overall economy and as agriculture was modernised, leading not to more small-scale opportunities but to the consolidation of land and agricultural resources among fewer large-scale producers.

But over the years a consensus emerged among many in the state and in civil society organisations working on issues of land and agriculture that smallholder agriculture was required to rebalance the rural economy and to open opportunities for those disadvantaged under apartheid and the economic system that emerged from it. Disagreements remain, in particular about the most sustainable path to creating and sustaining smallholder production. We are currently at a point where the corporate agro-food system is widely considered indispensable for food security in South Africa. Consequently, any efforts to expand black smallholder production must be done in tandem with the increasingly concentrated agribusiness sector. Supermarkets are seen as the way of the future, and conversely 'informal' markets or systems of distribution are seen as the product of historical neglect and marginalisation that should eventually be eliminated and replaced with a modernised food distribution system based on the logic of capital. This logic goes hand in hand with the commodification of food and the final detachment of food producers from food consumers.

So far we have used the terms small-scale and smallholder without defining them. These two terms will be conflated in this paper under the name of smallholder. There are many different definitions currently doing the rounds but there is general agreement that a useful definition will encompass differentiation within the category of smallholder.

Large-scale agriculture and agribusinesses currently favour a definition based on turnover rather than land size. Johan Kirsten (2011) argues that if measured by gross farm income, small-scale farmers should be considered as any producer with a gross farm income below R500 000 a year. The 2007 Census data shows that this

included 56.5% of what are called ‘commercial farmers’ in the census.

Two points of differentiation emerge from this definition. The first is that smallholders are economically diverse, and by this definition can incorporate subsistence producers using land in their backyards to purely commercial producers on large tracts of land. The second differentiation is by race, indicating that smallholders can be black or white. This is a necessary corrective to the dualism that has characterised the discussion to date, which equates smallholders with black producers and large-scale farmers with white producers.

But this is not sufficient as a definition of a smallholder. We also need to take into account the amount of land producers have at their disposal. A producer may be in possession of a very large amount of land but is only using part of it or is using it unproductively. Can they then be called smallholders? It seems that we must take some account of land holdings in the definition. There is no practical value in defining an unproductive farmer with a large amount of land in the same category as very productive farmers with very limited land at their disposal. What is a reasonable cut-off with regard to land size? Vink and van Rooyen (2009: 32) talk of farmers with less than 20ha as being small-scale, but ultimately measure scale on the basis of income. The size might have to differ according to type of production (e.g. extensive livestock vs. intensive horticulture), or perhaps we can find a happy medium that is able to incorporate livestock as well as horticulture (including orchards) and field crops. If we aim for 60–80ha as the upper limit of small-scale production, this can incorporate all types of production with the possibility of at least deriving a substantial portion of household income from agriculture. This can then be used in conjunction with Kirsten’s gross income definition to exclude producers with relatively large incomes from the definition of smallholder. The essential argument from PLAAS researchers (Hall 2009; Aliber et al 2009; Cousins 2010; Cousins in this volume) is that smallholders incorporate a range of different classes and social groups and production systems, and that they have differential relationships with markets. Cousins (2010) argues that the term ‘smallholder’ is problematic because it disguises these differences, and should be used only in conjunction with a qualifying adjective (e.g. ‘subsistence’ or ‘commercially oriented’). Without this explicit internal differentiation, policy and practice will end up treating smallholders as a homogenous group.

However, there is something inherent about small-scale production that may have some value in its own right, especially in relation to the ecological crisis. In agriculture this crisis is very much linked to a production model built on fossil fuels, technology removed from the direct control of producers, and integration into global markets where food travels long distances to reach the end-user. Farms are consolidating (growing in size and decreasing in number) because of the logic of economies of scale which are enabled by these factors. If we are to move away from this production model, the scale of production becomes an important part of the solution. There is general agreement on the need for vibrant smallholder production from the World Bank and the UN to *Via Campesina* (e.g. IAASTD 2009; ETC Group 2009; de Schutter 2010). This is not to say all small-scale production is inherently ecologically sound, but it is a necessary component of ecologically sustainable production. Gender, race and class differentiation among smallholder producers remains critical, especially if resources for support are to be targeted. But small-scale production has its own value beyond these differences.

Processes of smallholder formation

Ben Cousins (2007; 2010; this volume) focuses on the class differentiation of farmers. For all intents and purposes, this can be applied to differentiation within the smallholder category. He introduces the terms ‘accumulation from above’ and ‘accumulation from below’ to indicate different ways in which new farmers can be formed. ‘Accumulation from above’ refers to sponsored accumulation in the interests of established capitalist entities, including the state. Primary production is outsourced to smallholders, often with a high degree of institutional involvement, e.g. input provision, insurance, credit, secondary transport, sales and distribution directly managed by agribusiness or the state where it is involved.

‘Accumulation from below’ refers to farmers using their own resources to expand into capitalist producers with eventual possible absorption into agribusiness value chains. The notable aspect of this is that it remains within the framework of accumulation. This is consistent with Cousins’ suggestion that there is need for a bias towards the estimated 200–300 000 existing commercial black farmers, but without neglecting the importance, both economically and socially, of providing support to others

to produce food and to connect into the formal economy where they can.

In the case studies presented at the workshop and produced in this publication, we have no cases of accumulation from below. In all instances, there is significant infrastructural and technical support either from agribusiness or from the state to connect smallholders to corporate markets. In two cases, irrigation farmers in Msinga in KwaZulu-Natal (Buthelezi and Cousins) and urban food producers in Johannesburg (Lewis), the producers are generally marginalised or excluded from resources, but where resources do come in, they still come from above mainly via state welfarism. In these cases there is limited or no capital accumulation, placing the majority of these farmers outside the dichotomy of accumulation from above or below.

The agribusiness or commercial farming perspective offers a linear relationship between 'backward' subsistence agriculture and 'successful' commercial production. Are producers sustainably integrated into circuits of capital accumulation or not? That is the measure of advance or development of food producers. The articles in this publication raise the question of whether there is room for a diversity of production types that all receive appropriate support, whether private or public. That is, it raises the question about whether subsistence agricultural production is a valued part of the landscape that warrants a strategy and support in its own right, not necessarily and only as a precursor to commercial production, but as a part of diverse food production and distribution systems.

Hall, Cousins and others at PLAAS have highlighted the 'missing middle', a category of medium-scale black farmers that can fill in the gap between strategies of accumulation from above and accumulation from below and that are 'commercially oriented'. The importance of filling this gap is to create a diversified production base which can spread risk in the sector, and which brings racial and scalar balance to production. However, the focus on methods of capital accumulation (from above or below) limits our analysis to those producing directly into concentrated agribusiness markets, or at least into markets overshadowed by this concentration. Input supply, storage, processing and food retailing are all highly concentrated. It makes little difference from the overall point of view of the reproduction of capitalist social and economic relations whether accumulation occurs from above or below. It seems appropriate, in the current capitalist crisis, to begin to raise practical questions of

how to transcend accumulation as the driving logic of agricultural production.

Contemporary agrarian capitalism and smallholder integration

South Africa's agrarian structure is characterised by the concentration of resources and a dualistic structure of production. The National Development Plan (NDP) (National Planning Commission, 2011), which seems to be the product of a very distant government, has proposed integration of smallholders into corporate value chains as a key objective in the rural areas. One of the main contradictions in the NDP is that South African agrarian capitalism is in crisis, yet the NDP insists that the only way forward for smallholders is to be integrated into it (to paraphrase Peter Jacobs').

Looking at the big profits agribusiness corporations are reaping, there does not appear to be a crisis. But underneath those profits is an increasing cost-price squeeze, precisely for small- and medium-scale commercial producers, that threatens their long-term survival. Although food prices are rising, producers often get a small share of the final price, while input costs have risen dramatically as natural resources become scarcer and the logic of permanent growth constantly increases demand for these resources. The profitability of corporate agribusinesses is also built on the back of sharply rising consumer prices for food, and the consequent rise in hunger. The structural underpinnings of the system which produced this deteriorating situation are ecological, social and financial.

Ecologically, the reliance on fossil fuels and the impact of climate change is causing deterioration in the material base on which production is built – the land, water, livestock and vegetation. Yet integrating smallholders into corporate value chains, directed towards supermarkets especially, requires a duplication of these same production methods. This reinforces a path dependency at a time when this path is receding into unknown territory. The capitalist response to this is as it always was: a faith in technology to solve tomorrow's problems, for example, through the use of biotechnology, irrigation and mechanisation. However, these technologies themselves are heavily rooted in a fossil fuel economy and cannot be

separated from growing social inequalities in the form of greater concentration of land ownership in fewer private hands; growing hunger among those unable to purchase the bounty being produced by capitalist agriculture; and the radical separation of food producers and consumers.

This technological response also deepens agriculture's reliance on the credit economy. The provision of credit sits at the centre of any effort to integrate smallholders into corporate value chains, since agricultural production has been credit-driven for decades now, in South Africa as well as in any place where consistent surpluses are produced for sale. Money in the form of credit is a necessary condition for entry into capitalist commodity relations, and is also necessary for capitalism because indebtedness is the driver of 'fiat' money (Rowbotham 1998; *The Agonist* 2012) – the production of virtual money by the financial institutions to sustain capital growth. The vast majority of money in circulation is in the form of credit.

Producers require credit not only for immediate production, but also for a reserve to act as a buffer in conditions where prices drop unexpectedly. Historically, the state in South Africa provided buffer services for key crops through the operation of a floor price (a minimum price the state would guarantee in the event the market did not absorb all the production). The state therefore carried grain reserves, for example, which stabilised prices, but also encouraged overproduction because the state was a guaranteed market of last resort. Deregulation has transferred the price risk to individual farmers, whether black or white, funded through credit. The larger entities can take losses in their stride, either because they have diversified economic activities which spread risk, or because they have cash reserves or established lines of credit, or both.

For new entrants into the capitalist markets, credit is hard to come by, especially in the context of the past three years, where liquidity in the global economy as a whole has dropped drastically and the provision of credit has dried up. A few new entrants will be hand-picked for integration into the credit economy but for those outside circuits of accumulation and even for the majority of those accumulating 'from below' using their own resources, the lack of credit will prevent their growth and expansion. Those with control over the provision of credit (the banks and other financial institutions) determine the direction of investment and consequently the shape of commercial agriculture in South Africa. The state historically made some attempts to extend credit to new

entrants, especially via the Land Bank, whose mandate was nevertheless to profit from loans. However, some of the loans they made were questionable ('sub-prime') which is why the Land Bank got into such trouble – by loaning to people who could not, or did not, pay back.

The discipline of the credit market is required to ensure a constant flow of revenue to the lending institutions, over and above the amount that was lent (bank charges, interest and penalties). This additional revenue is considered to be a return on the risk they took in lending (i.e. producing money). For smallholder farmers (considering income and land size as the primary criteria) these charges are higher because they are not always in a position to repay the loans and they have few assets that can be seized. This means they are considered a higher risk. A greater share of the repayments will therefore accrue to the lender as returns to take account of that risk. Banks will not currently lend to risky borrowers unless under compulsion or state guarantee. Is the solution to expand credit, finding innovative ways of integrating smallholders into the credit economy, or to find other ways of overcoming this conundrum such as a way that does not rely on the same flow of resources?

Everyone is caught in the web of capitalist relations, which means production (even the production of ideas) is driven by growth and the accumulation of capital. Even if producers are not selling into markets, they are producing in the context of the commodification of agricultural products, which establishes an alternative source for what they are producing. So even if food producers are locked out of the credit economy, the exchange value of their products is still benchmarked by those inside the credit economy. That means they can sell only in relation to market prices. There are other values attached to their products though such as 'use values' which are directly realised through own consumption or distribution, i.e. not for sale to neighbours and social networks. This remains an important component of local- and household-level food security even while it functions in the shadow of capitalist markets.

Experiences to date

The articles in this publication consider some of the practical experiences of integrating smallholder farmers into agro-food value chains in South Africa. The emphasis is on private sector initiatives, with welfarist government support to smallholders as a counterpoint. The workshop

had presentations on government efforts to integrate smallholders into value chains via (corporatised) fresh produce markets, but we were unable to secure papers from the participants for inclusion in this publication. This is unfortunate because the fresh produce markets offer a potential alternative to corporate value chains based on food retailers. Hopefully, that story can still be told in the near future.

Speaking in his personal capacity, Michael Aliber from the Department of Agriculture, Forestry and Fisheries (DAFF), opens with a paper on the current wave of 'inclusionism' and its relation to multiplier effects in agricultural production. Aliber offers some valuable insights and intriguing statistics which suggest that subsistence production and local distribution of surpluses may add more real value to the food economy than the high multipliers of the formal economy, which may "signify the non-trivial inefficiency of over-developed value chains". Aliber points to two current government initiatives that may carry these ideas forward: the Zero Hunger Programme with preferential procurement from smallholders for public food purchases (e.g. schools, hospitals) and the decentralisation of agro-processing. These are both worth watching carefully.

The next two pieces, by Davison Chikazunga and Andre Louw, who both worked on the Regoverning Markets Programme a few years ago, discuss the conditions under which smallholders may be integrated into corporate value chains. Chikazunga highlights production infrastructure, in particular irrigation and greenhouses, and collective action in the form of commodity associations as key considerations in the case of tomatoes in Limpopo. He shows how the local wet market performs a vital role in stabilising farmer incomes in the off season. He conducts an income analysis which shows that those earning the most per hectare supplied the local wet markets, whereas those earning the least per hectare supplied to supermarkets over the entire year. This reveals a trade-off between stability of demand and income. Louw points out that agricultural restructuring has led to increased risk for farmers, and he highlights the role of credit, especially for on-farm investments. He indicates that cognisance needs to be taken of the heterogeneity of smallholders, and emphasises the importance of intermediaries who can provide efficient services to support smallholders and connect them to markets.

Lusito Khumalo and Mandla Nkomo offer lessons from their experiences in providing support in agribusiness smallholder procurement programmes in Limpopo.

Khumalo writes about his experience at Westfalia Fruit Estates in Limpopo, which has developed a model of smallholder integration for avocados, where the retailer provides credit, with management by the agribusiness Westfalia. It is essentially a contract farming scheme. The project shows that although a number of producers are making ends meet, only one of ten producers in the agribusiness mentorship programme managed to sustain the business of supplying Westfalia. Khumalo indicates that economies of scale, business efficiency and product quality are key issues. Mandla Nkomo offers seven lessons for smallholder integration into corporate value chains. His paper highlights the role of credit in the agricultural economy, and the importance of on-farm extension, which cannot be parochial or "invoice driven". Nkomo works at Technoserve, the company that was recently granted a R15m smallholder supplier development contract for Walmart-Massmart.

Nerhene Davis then offers a slightly different perspective on 'accumulation from above' in her analysis of the role of agribusinesses in supporting the Moletele land restitution claimants to maintain the commercial citrus production they inherited. Four separate strategic partnerships were formed on different farms, each with different results. Davis's preliminary research findings indicate that knowledge and control over key processes allow strategic partners to dictate the terms of engagement with resource holders in the form of the claimant's Communal Property Association (CPA). The commercial logic pursued on the restitution land led the partnerships to adopt the same approach to agriculture as that of other commercial producers, such as outsourcing of labour and production and a shift to flexible work. As a result, despite maintaining commercial production on the land, claimants have not benefited much materially.

Stephen Greenberg and Gaynor Paradza contribute a piece on the possible implications for smallholders of Walmart's entry into South Africa. A supplier fund proposed by Walmart-Massmart to assist producers (not only in agriculture) to meet Walmart's requirements was a condition of approval of the merger by the competition authorities. Greenberg and Paradza indicate the changes in supplier relations that Walmart might bring. They conclude that Walmart's entry will benefit a relatively small elite among smallholders. However, even this may come at the long-term cost of increasing dependency on a single large buyer, and depreciating terms of trade and quality, if global experience is anything to go by.

Jack Armour from Agri-Free State offers a piece from a commercial farmer's viewpoint that highlights key factors required for successful integration of smallholders into corporate value chains. These include training, 'incentivising' mentorship models, risk reduction through safety nets and marketing strategies that identify niche markets. He presents a public-private partnership model based on cellphone technology and decentralised agro-processing hubs that is currently under development in the Free State. Armour highlights the importance of involving experienced commercial producers, the use of new technology and local agricultural associations as critical factors for a successful intervention.

Marc Lewis and Ben Cousins conclude the case studies with preliminary analyses of field research on a collective urban garden project in Johannesburg and among small-scale irrigation farmers in the Tugela Ferry/Msinga municipality in KwaZulu-Natal respectively. In Johannesburg, the urban food producers receive sporadic support from the provincial government but production is very low and even though they are oriented to selling, the producers struggle to move beyond survivalist production. These cases show the experience of the majority of subsistence producers, who do not have much market information, lack the resources for consistent production of surpluses and are not selected for participation in agribusiness smallholder programmes. Cousins concludes this volume with initial research findings on production in Msinga and offers further insights into the underlying agrarian structure in relation to 'accumulation from below'.

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Conceptualising approaches to smallholders and markets

Michael Aliber³



Prologue

This contribution is not an academic exposition, still less an official statement of government policy or thinking. In the first place, the author's command of the issues is too weak to justify the pretence of an academic treatment; and in the second, he is not authorised to speak for government in any official capacity.

Rather, this is a 'personal reflection' on the theme of smallholders and markets, in which I hope to do little more than raise useful questions and maybe share a half-insight or two, relying on a combination of my (generally differently oriented) empirical work and exposure to recent policy discussions. My tentative suggestion is that part of our challenge is merely in articulating the conceptual challenges, which clutter our way towards a pragmatic vision for the smallholder sector and the rural economy of which it is a part.

Value chains, multipliers and the prevailing 'pro-inclusionism'

The explosion of interest worldwide in 'value chains' is astonishing. Within South Africa, much of the recent interest in value chains is focused on finding ways of ensuring that marginalised small-scale farmers, and the poor in general, are able to 'link' into existing value chains. This for example was the focus of the USAID-funded Agri-link programmes of the late 1990s and early 2000s and to some extent of the UK Department for International Development (DFID)-funded "Making Markets Work for the Poor" programme (Ferrand, et al 2004). Further, it is sometimes claimed that both the job and/or wealth creation potential of the agricultural sector lies only partially in primary agriculture, but more importantly elsewhere in the value chain. Thus the Land Bank's more recently proposed "value chain financing model", and the Agricultural Broad Based Economic Empowerment (AgriBEE) Fund, which was created to provide grant funding through which historically disadvantaged individuals (HDIs) could purchase equity in downstream beneficiation activities. The New Growth Path (NGP) sets targets for job creation in agro-processing which are more than half as great as its target for increasing the size of the smallholder sector. It also calls for "[s]upport for market and financial institutions, especially co-ops, that enable small producers to enter formal value chains..." (Economic Development Department (EDD) 2011: 18). In other words, the prevailing approach among policy-makers in the agricultural sphere is "pro-inclusion". There are, or may be qualifications to this characterisation, but we will come back to those below.

'Value chains' are closely related to another concept often used in discussions of economic development in the agricultural sector and in other sectors, namely 'multipliers'. Simply put, a multiplier is a mathematical relationship between the direct impact of, say, an investment in the agricultural sector – i.e. the number of primary jobs created, together with the secondary job creation caused by that investment, further increase demand for these agricultural products. The higher the 'multiplier effect', the greater the 'bang for the buck'; investment decisions should take the secondary impacts into consideration as well, not least because some sectors have higher multipliers than others. Agriculture, in particular, is often touted as having a high employment

multiplier. The National Planning Commission's *National Development Plan: Vision for 2030* (NPC 2011) posited that one million jobs could be created by means of targeted investments in agriculture; of these, one third would be secondary. Although the researchers (Bureau for Food and Agriculture Policy (BFAP) 2011), who produced this particular analysis, regarded this multiplier of 1.5 as 'conservative' (i.e. for every 100 direct jobs created, an additional 50 jobs would be created by means of multiplier effects), it is still high.

It is worth pausing to ask where estimates of multipliers come from? Most come from constructing and then manipulating input-output tables or elaborations thereof. An input-output table is a matrix in which the rows and columns refer to sectors. Typically, the columns of the matrix show how much is spent by each sector (e.g. in an average year) on intermediate goods produced by other sectors. The rows correspondingly show for each sector how much it receives from the other sectors. As such, the table seeks to capture the inter-relationships between sectors. Mathematical manipulation of the input-output matrix, in conjunction with an array of sector-specific labour coefficients (e.g. how many jobs are implied by a certain amount of income in a sector), yields the labour multipliers. Various other types of multipliers can also be derived.

What is the purpose of this brief exposition? Firstly, to clarify the relationship between value chains and multiplier analyses: the way in which the products of one sector become intermediate goods/inputs for another sector is in essence a different way of conceptualising the relationship of different agents along a value chain. Of course, that does not mean that value chain and multiplier analysis are the same: rather, they are analyses of the same relationships, although conducted in different ways and for different reasons and typically, also at different levels of detail/aggregation.

The second purpose is to show that enthusiasm both for 'linking into value chains' and for 'multiplier effects' appears to be different perspectives on the same phenomenon. The former perspective emphasises the virtues of smallholders with better access to existing value chains, as well as the advantages of smallholders and other HDIs having an ownership stake in value chains beyond the level of primary production. The latter perspective maintains that an investment resulting in additional agricultural production means more agricultural product being fed into the chain, which will have positive

economic spin-offs beyond the immediate impact of the investment. It also means, among other things, that the smallholders are integrated and perhaps better supported. In sum, the rewards of linking to markets and the benefits of the multiplier effects are different aspects of the 'advantages of inclusion'.

Finally, the third purpose is to indicate that the underlying logic of multiplier analysis is both highly mechanical yet abstract. While a particular input-output table may be rooted in careful data gathering and estimation, the application of a multiplier derived from an input-output table to a specific situation in a particular place (e.g. a proposed investment) is necessarily an abstraction and the true implications can be grossly misread. This is masterfully illustrated by Hart's (1998) critique of statistically based regional impact analysis. Hart compares the findings of such analyses to careful case studies in Malaysia, Taiwan, and China and shows that the true implications of, say, an investment into agriculture, depends crucially on local context. These contexts are ignored at the cost of drawing false conclusions based on spurious statistical relationships⁴. To understand the applicability to South Africa, it is important to distinguish between different scenarios that could be contemplated. The table below speculates in broad, qualitative terms as to the likely 'linkage effects' and 'multiplier effects' according to six different scenarios and shows that even at a high level of abstraction there is reason to expect that these effects vary a lot from one case to another. Not only that, but a positive 'linkage effect' does not necessarily imply a positive 'multiplier effect' as it depends on the scenario. In other words, as closely related as they may be, they still operate separately, to the extent that they are differentially sensitive to context.

Doubts about the inclusion agenda

For the most part, the table below assumes that linkage effects and multiplier effects are 'good'. But particularly on the linkage side, this assumption is frequently contested, especially by those who are sceptical of the advantages of inclusion, that is, those who are sensitive to the dangers of 'adverse incorporation'. In du Toit's typically eloquent turn of phrase: "Couched at this general level, the concept of adverse incorporation thus functions as a fairly broad critique of neo-liberal accounts of poverty and development, accounts that

underplay the risks and disadvantages of inclusion and participation in unregulated capitalist markets" (du Toit 2009: 2). The implication is that adverse incorporation can also manifest itself in more specific ways as well. Arguably the prototypical instance of adverse incorporation is that which takes place via the process which Ponte refers to as "restructuring of value chains with continued participation":

This refers to changes in an existing value chain that alter the terms and conditions of participation for chain actors already in the chain. For example, when supermarkets impose stricter quality standards, require conformity to Fair Trade standards, or simply squeeze prices, this can significantly change investment demands, rewards or risk exposure for small (and/or marginal) producers, and salary levels and employment opportunities for permanent and casual workers (Ponte 2007: 13).

While such changes are not necessarily to the disadvantage of the farmer, they often are, particularly as the purchaser shifts more and more costs on to the farmer. This scenario helps explain at least one important feature that sets apart pro-inclusionists from those concerned with adverse incorporation. The pro-inclusion perspective considers the advantages accruing to farmers who freely avail themselves of a new opportunity: it is in effect a 'revealed preference' argument – that the opportunity is advantageous is suggested by the fact that farmers seek it and, if possible, take it up. The particular situation of adverse incorporation indicated above, however, transpires over time – and may well start in a way that justifies the pro-inclusion camp's perspective.

While the purpose here is not to take a stand on the choice of the more pertinent perspective for Africa, it is worth venturing one observation: the adversely changing value chain scenario has already played out quite considerably in South Africa's agricultural sector, particularly in horticulture, via the imposition of private standards by supermarkets. The irony is that it is into this situation that inclusionists are still hoping to retroactively assist smallholders to link up to formal value chains; especially the supermarkets, for the simple reason that supermarkets have captured so much of the consumer spend. This is not to say that there is no possibility that the terrain will shift further to the detriment of producers, but in reality much of the shift has already taken place and yet these markets still appear to offer attractive opportunities to new entrants by assuming some of the hurdles can be cleared.

Table 1: Likely 'linkage effects' and 'multiplier effects' according to different scenarios

Scenario	Scenario description	'Linkage effect'	'Multiplier effect'	Net implications?
Commercial expansion	E.g. irrigation expansion, better transport infrastructure, lower production costs, etc.	Not relevant	Possibly positive, but with consequences mainly for urban employment?	Possibly positive implications, but does not confront prevailing downward trajectory in number of farm units and employment
Former homeland production-led stimulus, with emphasis on local markets	E.g. improved extension, access to inputs, infrastructure; decentralised agro-processing and decentralised procurement	Linkages to local markets (by construction)	Possibly significant at local level	Livelihood creation, rural development, improved local food security?
Former homeland production-led stimulus, with emphasis on non-local markets	E.g. improved extension, access to inputs, infrastructure; link-up programmes and incentives	Linkages to non-local markets (by construction)	Possibly significant, but with consequences mainly for urban employment?	Livelihood creation, rural development, improved local food security?
Land Redistribution for Agricultural Development (LRAD)	Decline of formally marketed surplus, some increase in locally marketed surplus?	Some linkages to local informal markets	Somewhat negative	Some livelihood creation
Proactive Land Acquisition Strategy (PLAS) , 'best case'	Maintenance of large scale commercial, production continuity, continuity of contracts	None, no new linkages	None	Minimal economic/livelihoods significance Political gains or accusations over elitism?
PLAS, short-term case	Partial maintenance of LS commercial, production continuity, continuity of contracts	No new linkages, some linkages lapse	Somewhat negative	Some possible damage to the formal economy, probably modest

If adverse incorporation is the counterpoint to the pro-market linkage view, what is the counterpoint (element) of enthusiasm for the multiplier effect? As far as we are aware, the literature does not posit one, apart from the fact that many observers have noted that the validity of multiplier analysis depends on whether or not there is spare productive capacity in the affected sectors. If not, then an increase in demand may simply result in increased (factor and product) prices rather than increased activity (and thus employment) in other sectors (Stevens and Lahr 1988). This is intuitive enough, but one might logically ask how typical is it to have spare capacity? It suggests either the rather odd possibility that excess capacity was invested in and never used, or more likely, that the capacity was created and used but then became under-utilised due to poor performance in the sector. In other words, the multiplier analysis is generally only applicable to situations where the agriculture sector is lagging behind its own previous performance.

However, I would like to suggest an altogether different view to the pro-multiplier view by considering the table below, which shows the estimate average (net) remuneration per hectare per year for different South African 'land use regimes'. Although these figures are relatively 'shaky' estimates that should not be taken literally, they nonetheless provide a suggestive, albeit unreliable order-of-magnitude ranking.⁵

For the purposes of this discussion, the important comparison is that between large-scale commercial and ex-Bantustan farming. The relatively high value for ex-Bantustan farming could reflect the relatively good land quality of some of the ex-Bantustans compared to, say, the Karoo but the comparison is still telling in that it does not adjust for the fact that much of the arable land within the ex-Bantustans is under-utilised (e.g. for purposes of

Table 2: Average remuneration per hectare by livelihood type

Farming regime	Average Rand/hectare
Large-scale commercial	368
- excluding Northern Cape	549
Land reform	171
Ex-Bantustan	683

Source: Aliber et al (2011)

the calculations, the denominator is not the hectareage actually used but that which is available). Moreover, even when excluding the Northern Cape from the calculation of the returns per hectare for the large-scale commercial farming sector, the estimated value for the ex-Bantustans is at least as high – if not higher.

What is the explanation for this counter-intuitive finding? We can be fairly certain that the explanation is not due to higher land-use intensity in the ex-Bantustans (i.e. driven by the application of abundant labour as opposed to mechanisation). More likely, the reason for the relatively high value for ex-Bantustan areas is that subsistence-oriented producers and those who sell to local, informal markets internalise the margins that would otherwise accrue to the formal marketing and distribution system. In Lipton's terms, these producers enjoy relatively low "unit transactions costs" (Lipton 2010) and intuitively that seems right. But another way of saying this is that they have weak linkages into value chains, whether by agro-processing or by distribution and retailing, to the extent that for subsistence and locally marketed production, transport costs feature very little in more elaborate chains, and it begins to seem that high multipliers signify the inefficiency of over-developed value chains. Arguably, this is adverse incorporation from a different perspective: the more developed the distribution system, the more the farmer is sharing the final value of the product with other actors along the chain, making the terms of farming more precarious. Some of that gap may be in the form of additional value by virtue of beneficiation, but much is simply logistics and transport.⁶

Emerging themes in government policy

This concluding section outlines some of the emerging directions in government's policy regarding smallholders and marketing. It is fair to say that, until quite recently, the prevailing sentiment was very much the pro-inclusion position noted above. This is still arguably the dominant view or prescribed government direction.

Recently, however, there are two noteworthy developments. The first is the proposed introduction of the Zero Hunger Programme. Essentially, Zero Hunger is the increasing use of preferential procurement practices for food on behalf of government institutions directed towards smallholders. This will particularly target the

National School Nutrition Programme, government's feeding scheme for government schools and public hospitals. Initially, the focus will be largely on *rural* schools and hospitals. The idea is that through the programme, smallholders will furnish a progressively larger share of the food needs of these government institutions, and in doing so cater to a broader range of foods in the prescribed menus which means more logistical complexity and more involved agro-processing.

The second, complementary development is the elaboration of a new agro-processing strategy. As with Zero Hunger, this policy is not yet finalised, but indications are that one salient theme in the emerging strategy is the state-led investment in agro-processing capacity as a means of both deconcentrating and decentralising the agro-processing sector. As such, an apparent goal of the strategy is to counteract the trend towards concentration of capacity and thus of market power in the post-primary stages of agro-food value chains.

The unifying theme between the Zero Hunger Programme and the emerging agro-processing strategy – even though it does not appear explicitly anywhere in policy – is what we might call 'localism'. This is the attempt to promote local self-sufficiency in food production, together with localised, albeit limited, agro-processing capacity. What is interesting about this strategy, if it can be called that, is that it represents a sort of intermediate form of inclusion, i.e. one that gives precedence to local linkages and limited multipliers. In this interpretation, the particular function of Zero Hunger is to give smallholder producers a boost for them to ultimately cater more for local food demand. It is only partially an end in itself, given that government food procurement is limited relative to private food demand, even within the ex-Bantustans.

The idea is compelling. It remains to be seen how well government will be able to implement it. The challenges are numerous and large, which is not to say insurmountable. For one, different government departments in different provinces have established their own procurement systems. Thus, phasing in preferential procurement in favour of smallholders is a very involved process. Second, while in principle there is money available to invest in new agro-processing capacity by merely redirecting existing conditional grants (e.g. the Comprehensive Agricultural Support Programme grant), in practice this is difficult to do – established expenditure practices have their own inertia which is not easily overcome. And third, it is one thing to invest in new agro-processing capacity, but who is going to manage it?

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Determinants of smallholder farmers' participation in modern food markets: the case of tomato supply chains in Limpopo

Davison Chikazunga



Abstract

In South Africa, like other developing countries, there is a debate about the implications of restructuring the food markets of smallholder farmers. There has been increased interest among policy makers, researchers and practitioners on how smallholder farmers can be made to participate actively in the modern market channels. The general view is that if market access among smallholder farmers can be improved, the incidences of rural poverty in developing countries can be reduced significantly. This study evaluates the factors which determine the inclusion of smallholder farmers in modern market channels using the case of tomato growers in Vhembe and Mopane districts of Limpopo Province, South Africa. The study shows that there is a low participation of smallholder farmers. However, their increased participation in modern markets is possible if certain conditions are put in place at farm and institutional levels. Production infrastructure (irrigation and greenhouse) and collective action (commodity) are vital for smallholder farmers' participation in formal agribusiness supply chains. In addition to farm level dynamics, both the private and public sector can play important roles in facilitating the inclusion of smallholder farmers either through application of business models, such as local procurement, or through enacting pro-poor policies such as AgriBEE, which can foster the participation of smallholder farmers in modern market channels.

The dynamics of food markets

Smallholder agriculture in the 21st century is at a crossroads, especially due to the advent of the agro-industrialisation phenomenon. According to Reardon et al (2001), "agro-industrialization" comprises three related sets of changes: firstly, the growth of agro-processing and distribution; secondly, farm-input provision activities off-farm; and thirdly, institutional and organisational change in the relationship between agro-industrial firms and farms. This phenomenon is characterised by the transformation of food markets in which market power has shifted from producers to buyers.

The restructuring of the food markets has led to the rearrangement of the food supply chains characterised by the rise in market dominance by supermarkets and agro-processors (Humphrey 2007). These market channels

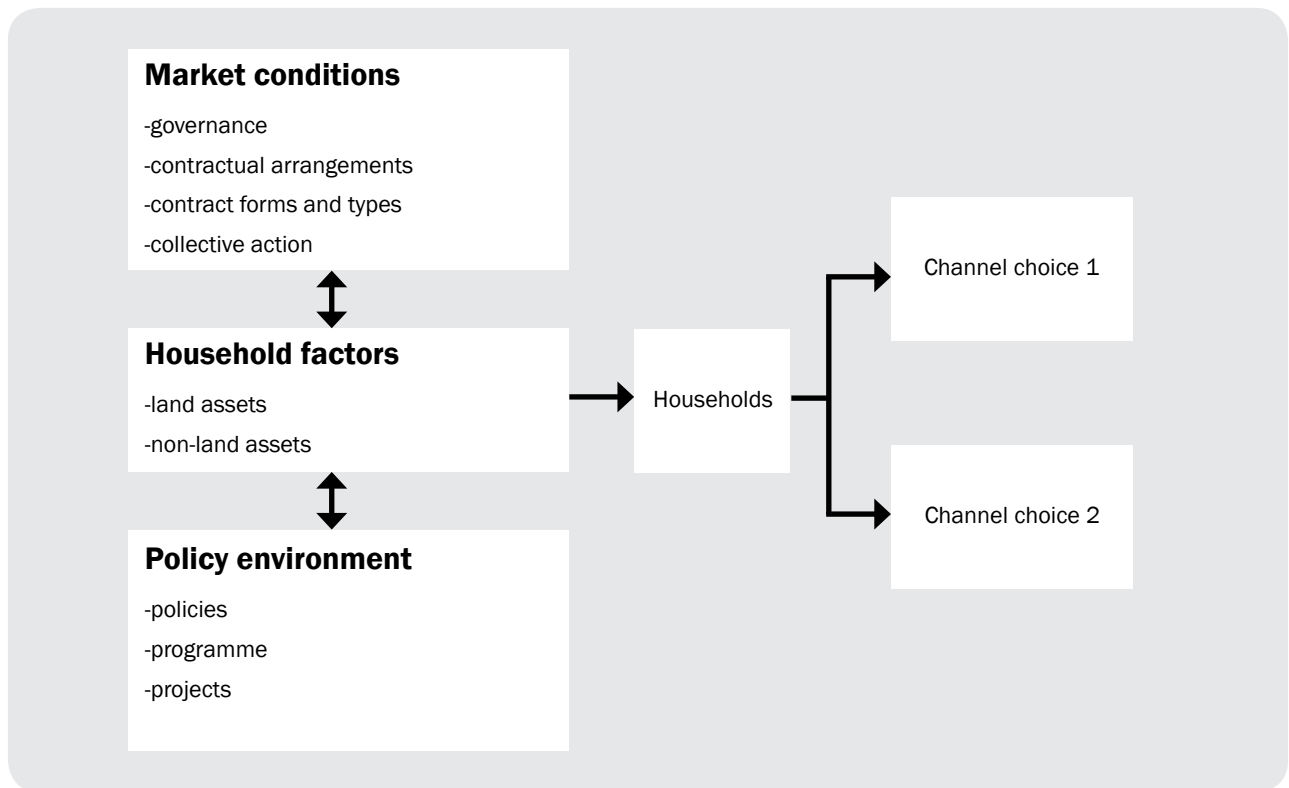
have been referred to in different ways: as modern, dynamic, restructured or formal markets among many others⁷ (Pote Peter et al 2007). The study uses the term modern markets in line with the Regoverning Markets terminologies representing supermarkets, wholesalers and processors. Reardon (Reardon & Berdegué 2002; Weatherspoon & Reardon 2003; Reardon & Timmer 2006), the modern-day father of supermarkets, hypothesises that these modern markets have grown in their dominance over the food retail markets. Today, they determine how much should be produced, of which quality, at what price, and by whom, and this has been reinforced by the introduction of private procurement standards for coordinating food quality and safety requirements between consumers and producers.

It was postulated that the restructuring of the food markets process was kick-started by dynamics in population, food consumption patterns and a general rise in household incomes (Reardon and Timmer 2006). Some consumers are becoming more demanding in terms of food quality and safety even in the developing world. It is further hypothesised that the demand for food safety and quality standards has been driven by changes in demographics and disposable income (Huang and Reardon 2008). This has led to the creation of convenience-food niche markets for more affluent consumers, such as frozen, pre-cut, pre-cooked and ready-to-eat food items (Reardon and Berdegué 2002). Longer working hours, diminishing leisure time, the greater role played by women in the workplace and greater availability of information also had a significant influence on food markets (Botha and van Schalkwyk 2006).

According to Louw et al (2007), the restructuring of South African food markets is at an advanced stage. It is observable through consolidation, trans-nationalisation and the emergence and disappearance of supply chain actors. The country has advanced stages of consolidation comparable to emerging economies in Latin America and Central Europe. Consolidation of the food industry in South Africa is seen in the high levels of concentration in food production, processing, wholesale and retailing (Weatherspoon and Reardon 2003). Unlike the other countries in sub-Saharan Africa, the expansion of supermarkets is driven by local investment as opposed to foreign direct investment (FDI) (Louw et al 2004).

The transformation of agro-food markets, however, risks the exclusion of smallholder farmers from food markets. The risk is more pronounced among small-scale

Figure 1: Market channel choice framework



emerging black farmers, who have been subjected to double exclusion. Firstly, by the country’s colonial legacy and secondly, they were excluded on the basis of their production capacity. Research has shown that there are few black farmers who participate in modern market channels (Kirsten and Sartorius 2002).

Conceptual framework

The conceptual framework presented in Fig.1 shows the key factors which inform householders’ decisions on whether to participate in a market channel or not. The study hypothesises that there are three decision-making blocks which are vital to market channel decisions: the policy environment, the market environment and the household environment. In each block, there are several key variables which affect (positively/negatively) the household on whether to supply a specific channel or not. It should be noted that these are people who already have access to land and irrigation.

Survey results

- Household characteristics.* This section presents an analysis of the socio-economic characteristics based on a household survey of 220 tomato growers in Mopane and Vhembe districts in Limpopo Province. These two districts are responsible for up to 70% of tomatoes produced in the province. The survey results showed that the majority of the households are male headed (over 60%) with the average age of the household head being 54 years. The majority of the respondents are full-time farmers although there are a considerable number of respondents who are either engaged in formal employment or private businesses. On average the household heads have low levels of education with an average of seven years of formal education. About 30% of the respondents have formal training in agriculture – mostly in crop production.
- Household endowments.* Agriculture is the main source of income (84%) among the survey respondents, however there are a significant number of

households that consider government grants as their main source of income. The average farm size is three hectares, ranging from two to 50 hectares. Few households own or have access to production implements, less than 30% of the farmers own a tractor and less than 20% own a vehicle. Few respondents (less than 5%) have access to relevant production infrastructure for tomatoes such as greenhouses and packhouses. The majority of the respondents have access to irrigation although some households use rudimentary irrigation systems (buckets).

- *Tomato production and marketing.* In the survey, the average tomato production area is 3.55ha and the average tomato yield is 19 tons/ha. Farmers supplying to the agro-processors have the highest yield of 26 tons/ha, whereas farmers supplying to the local market have the least yields (14 tons/ha). Agro-processors have the highest total tomato production (170 tons), followed by those supplying to hawkers (87 tons) and fresh produce markets (72 tons) whereas farmers supplying local markets have the least production (32 tons). There are no farmers producing tomatoes in the first two months of the year. Tomato production has two distinct peaks around May and in September. On average, each farmer produces two cycles of tomatoes.

The household survey shows that there are six main tomato marketing channels in the study namely retail chains, agro-processors, wholesale markets (national fresh produce markets), traders, hawkers and local municipal markets. Over 70% of the farmers interviewed did not have a fixed marketing channel, most of them supplied to more than one market and, in some cases, up to four channels.

According to Table 3, the majority of the farmers supply their tomatoes to hawkers (30%) followed by those supplying to agro-processors (23%). Wholesale markets (Johannesburg Fresh Produce Market) and the local markets have the least number of respondents supplying them. Over 70% of the respondents supply to more than one marketing channel: in some cases individual farmers supply up to four market channels. Respondents market their tomatoes throughout the year, although there is a significant variation across households. The majority of the farmers (more than 90%) supply their tomatoes to the markets as individuals and less than 5% supply collectively.

Determinants of market channels

The results of an econometric estimation show that location, education, farm size, greenhouse, market channels, collective action, supermarket proximity, mobile phone and irrigation type are significant determinants of market channel choice among smallholder tomato growers in the study area.

- *Location.* The result on location implies that households in a specific geographic region have a higher likelihood to participate in modern market channels compared to households elsewhere. In this case, a household located in Vhembe district is more likely to participate in modern market channels compared with a household in Mopane District. A possible explanation is that Vhembe district hosts more agribusiness firms which are active in the tomato value chains compared to those in Mopane district. This is evidenced by the fact that Vhembe district is home to three quarters of the tomato factories in South Africa, including a Tiger Brand factory, which is the biggest tomato processor in the country. One possible explanation may be the location of distribution or marketing infrastructure such as a packhouse, distribution centre, collection depot or a factory. This has direct implications on transaction costs incurred by farmers. If an area has such infrastructure this will reduce transaction costs incurred by farmers especially in relation to transport and search costs.
- *Education level.* The results of this model indicate that household heads with higher education levels will better understand procurement demands set by modern market channels, especially supermarkets and agro-processors. Food safety and quality standards as well as contractual arrangements with agribusiness firms require certain levels of literacy. Given the low level of literacy among the respondents (averaging seven years) education may become a critical factor in market channel choice, with the less educated individual likely to prefer informal market channels, where transactions are a simple handshake characterised by little or no paper work. Education among farmers can also propagate information asymmetry among the farmers with those with better education being better placed in

Table 1: Farm assets and equipment

Item	Number	Percent
Transport:		
Car	76	34.55
Lorry	18	8.18
Tractor	69	31.36
Infrastructure:		
Greenhouse	3	1.36
Packhouse	1	0.45
Irrigation access:	215	97.9
Drip	100	45.45
Sprinkler	8	3.64
Furrow	111	50.45
Bucket	1	0.45

Table 2: Tomato production

	Area (in Ha)	Yield (in kg per ha)	Production (in kg)
Average	3.55	19 504.05	78 497.07
Supermarkets	3.83	15 873.00	54 738.00
Agro-processors	5.76	26 481.88	170 786.88
Wholesale market	3.72	16 780.43	72 658.70
Hawkers	3.98	25 619.17	87 551.67
Traders	3.06	17 333.50	64 501.50
Local wet market	1.86	14 105.36	32 718.64

Table 3: Market participation (percentage of households)

	% (N=220)
Supermarkets	17
Agro-processors	23
Fresh Produce markets	8
Hawkers	30
Traders	12
Local market	10

- accessing and comprehending market information. This is very significant in the fresh produce sector where there are strong price variations both spatially and temporally.
- *Farm size.* The results on farm size show that farmers with relatively bigger farms are more likely to participate in modern market channels, because they can produce large volumes. In this instance, they are likely to have the capacity to produce sufficient quantities that can meet the quantity/and supply consistency demanded by modern markets (agro-processors and supermarkets) as well as fresh wholesale markets. From a transaction cost perspective agribusiness firms (supermarkets and agro-processors) are likely to incur lower transaction costs when procuring from farmers with relatively large farms than those with smaller farms. Procurement from smaller farmers will increase coordination costs incurred in administering supply from a large pool of small farms compared to procuring from a few large farms. Agribusiness firms usually have a minimum threshold in terms of quantities which they can procure from a farmer to address the coordination cost problem. For example, Tiger Brands will not buy anything less than one ton of tomatoes and the same applies to supermarkets.
 - *Greenhouse.* Results indicate that farmers with access to a greenhouse (owning or renting a plastic tunnel) are more likely to participate in modern market channels than those without access to a greenhouse. A possible explanation is that farmers with greenhouses/tunnels can produce throughout the year as well as improve the quality of their fresh produce. Formal market channels (supermarkets and agro-processors) require stock on their shelves or processing machines any time of the year, hence they require farmers to supply them consistently throughout the year. Although supermarkets do draw on local production more during peak season, there remain issues with produce quality and consistency of supply. Access to a greenhouse/tunnel, among other kinds of infrastructure (e.g. pack-houses), allows a farmer to manage production risk as they are able to produce quality products all year round with controlled exposure to natural elements like hail, storm, evaporation, pests and rodents which are detrimental to production. In this regard, farmers with greenhouses can consistently meet agribusiness requirements for supply consistency.
 - *Market portfolio.* There are a number of market channels to which farmers supply their tomatoes. The results indicate that farmers supplying to formal market channels are likely to adopt a diversification strategy in order to deal with price risk. The market portfolio of the farmer relates to prices, suggesting that supplying more market channels is likely to produce higher prices on average. Despite the absence of time series data on prices, the survey results show that although tomato prices are higher in modern markets they also fluctuate significantly more than in traditional markets. Hence, risk-averse farmers are likely to adopt a diversification strategy which includes selling to both traditional (e.g. roadside markets) and modern markets (e.g. agro-processors).
 - *Farmer collective organisations.* These are a pooled variable representing different forms of co-operation among farmers. Four types of farmer organisations are presented in this study area, namely, agricultural co-operatives, irrigation schemes, collective marketing and commodity associations. The results suggest that collective action allows farmers to gain economies of scale and bargaining powers which minimise transaction costs incurred in supplying modern market channels. Collective action addresses two main market access limitations. Firstly, it reduces transaction costs such as transport, search, negotiation and administration costs faced by farmers in supplying agribusiness supply chains, especially to supermarkets and agro-processors. Secondly, collective action through farm organisation plays a coordination role between firms and farms. The coordination role is very important especially when it comes to the transmission of private procurement standards between firms and farms. The coordination role is also important in matching the procurement requirements by agribusiness and production capabilities by farmers.
 - *Irrigation technology.* This variable is a dummy variable with 'one' representing sophisticated irrigation technologies, such as drip and sprinkler systems and 'zero' representing traditional irrigation technologies like furrow and bucket systems. The results show that farmers with high technology systems can produce tomatoes throughout the year to allow them to meet the supply consistency requirements set by modern markets like retailers and agro-processors. Reliable irrigation is a prerequisite for securing a

fresh produce supply contract from agribusinesses. Ownership of drip irrigation and sprinkler irrigation allows farmers to water their crops efficiently and consistently. Advanced irrigation technology, therefore, allows farmers to grow tomatoes over larger tracts of land enabling them to produce more quantities consistently.

supplying to modern market channels. The local wet market also performs a vital role in stabilising farmer incomes in the off season.

Summary and discussion of results

Net income analysis

Table 4 below, shows the price offered to farmers by different market channels in both peak and off-peak tomato seasons. On average, local wet markets and the fresh produce markets offer the highest prices. During the season, supermarkets, local wet markets and hawkers offer the highest prices. During the off-peak season, local markets offer the highest prices. Price fluctuations are greatest with the local wet markets, supermarkets, agro-processors and the national fresh produce markets (FPMs), hawkers and traders have relatively stagnant prices. There is no significant difference across the categories on the average prices, however, during the off season prices fluctuate significantly across different market channels.

Table 5 below, shows a comparison of the net incomes realised by tomato growers supplying to different marketing channels in the areas studied here. Farmers supplying to hawkers have the highest income per hectare, whereas farmers supplying to supermarkets have the least net income per hectare. Overall, the net income analysis suggests that farmers supplying to traditional market channels receive higher incomes than those

The results presented in this paper showed that commercial smallholder farmers have multiple market options available and accessible to them. These can be categorised into modern and traditional markets. The survey results show that modern food market channels are not popular among farmers, and that they prefer supplying to traditional markets such as hawkers and traders. The survey results also show that there are price differentials across the different market channels, and that price fluctuations are greatest with the local wet markets. There is no clear pattern on the price differential between the modern and traditional market channels. Local wet markets have relatively higher prices at both peak and off seasons. The net income analysis suggests that farmers supplying to traditional market channels receive higher incomes than those supplying to modern market channels.

The analysis presented in this paper shows that traditional markets are conducive for the majority of the respondents. Participation in modern market channels demands a threshold investment in relevant production infrastructure such as greenhouses and irrigation technology as well as adequate production land. Given poor yields, inferior quality and production risks, traditional

Table 4: Tomato prices (in Rands per kg)

	Average year-round prices	In-season price	Off-season price
Supermarkets	0.83**	0.95	0.57
Agro-processors	0.83*	0.62	0.47
JFPM	0.90*	0.91	1.04
Hawkers	0.89	0.95	0.89
Traders	0.90	0.81	0.71
Local wet market	0.69**	0.95	1.13
Average	0.85	0.81	0.86**

* (P<0.10) =10% significance level

** (P<0.05) =5% significance level

*** (P<0.01) =1% significance level

Table 5: Tomato incomes (in Rands)

	Net income (Rand per ha⁹)
Supermarkets	R26 623.20
Agro-processors	R44 061.56
JFPM	R32 447.28
Hawkers	R54 026.67
Traders	R36 873.50
Local wet market	R33 935.84
Modern market channels*	R34 377.34
Traditional market channels*	R41 612.00

* average

market channels are more relevant to the majority of the smallholder farmers in the study area. To shift the existing marketing patterns towards modern markets requires adequate investments for organising farmers as well as production infrastructure.

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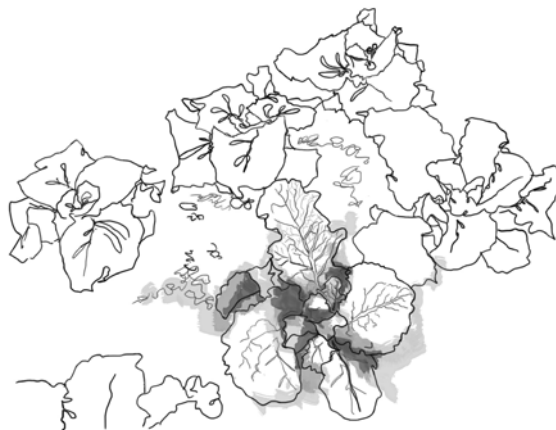
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Sustainable policy support for smallholder agriculture in South Africa: key issues and options for consideration

Andre Louw



Introduction

Like many other sub-Saharan African countries, South African agriculture is dualistic in nature with two sectors existing parallel to each other – the small-scale farming sector on the one hand and the commercial farming sector on the other. The small-scale farming sector is generally characterised by small farms that use labour-intensive traditional production techniques and lack institutional capacity and support, whereas commercial agriculture is typified by farms with relatively high turnovers that use capital-intensive modern production techniques

and have links with key input and output markets (Greenberg 2010; Mudhara 2010). With dualism inherited from apartheid, the small-scale sector has predominantly black farmers while the commercial sector comprises chiefly white farmers, hence it is no surprise that the post-apartheid government has, in the past eighteen years, been focused on trying to establish and develop the small-scale sector to a more commercialised small-scale farmer level.

Policy directives, such as land reform and preferential procurement schemes, have been made with the aim of redressing the divide between the small-scale sector and

the commercial sector. However, despite their efforts, many small-scale farmers are still lagging behind the commercial farmers. Vink and van Rooyen (2009) report that this divide seems to be growing. This raises the questions: What are the issues that policy fails to take cognisance of to direct the sustainable development of the small-scale sector? What are the key aspects to be considered for sustained policy support for the development of the small-scale sector? Are certain social and cultural aspects playing a major role in this transformation process?

To answer these questions, this article discusses observations on the developments and operations in the agriculture and agribusiness sector in South Africa and also speculates on the implications to the small-scale farming sector. In discussing the latter implications, the importance of understanding the heterogeneity and complexity of small-scale production is highlighted.

The heterogeneity that exists in the small-scale farming sector is a reflection of differing farming objectives. The reasons for production of smallholder farmers vary from making a partial contribution to the food requirements of their households and providing a wider range of livelihoods, to generating a primary source of income. From this understanding, van Averbeke and Mohamed (2006) identify three different types of smallholder farmers:

- *Subsistence farmers.* These are farmers whose main farming objective is for household consumption and there is very limited sale of produce as they rarely produce surpluses and sometimes not even enough for their own consumption. These farmers make up the majority of the small-scale farmers.
- *Emerging or smallholder farmers.* These are the farmers who have the desire and are increasingly working towards commercialising their production.
- *Commercial smallholder farmers.* These are the farmers whose main objective is to earn income from the sale of their produce. They constitute the minority of the small-scale farmers.

These different groups of small-scale farmers commonly have been viewed as depicting different stages of a trajectory from subsistence-to-small-scale, emerging-to-small-scale commercial, and ultimately commercial farming. Entrenched in this view is the idea of what

makes a smallholder successful. Successful small-scale farmers have been portrayed as productive farmers who are actively engaged in marketing their produce and earning sufficient cash income, primarily from agriculture, to live a poverty-free lifestyle. Therefore, on this basis, the attainment of small-scale commercial farmer status represents success, in most cases assisted through well-structured support and extension programmes – which is the goal of many policy directives. Both subsistence and emerging farmers seem to have a ‘permanent’ role to play in South Africa and Africa in a rather diverse production structure where they are comfortable in their current situations.

Figure 1 opposite shows the different groups and the possibility of progressing or graduating from one level to the next, i.e. from subsistence to commercial farming. But in reality, progression from subsistence to commercial is often not guaranteed due to preferences or circumstances. Although the figure shows that subsistence farmers generally lack capacity, certain circumstances would appear to be the most effective in preventing progression to commercial farming.

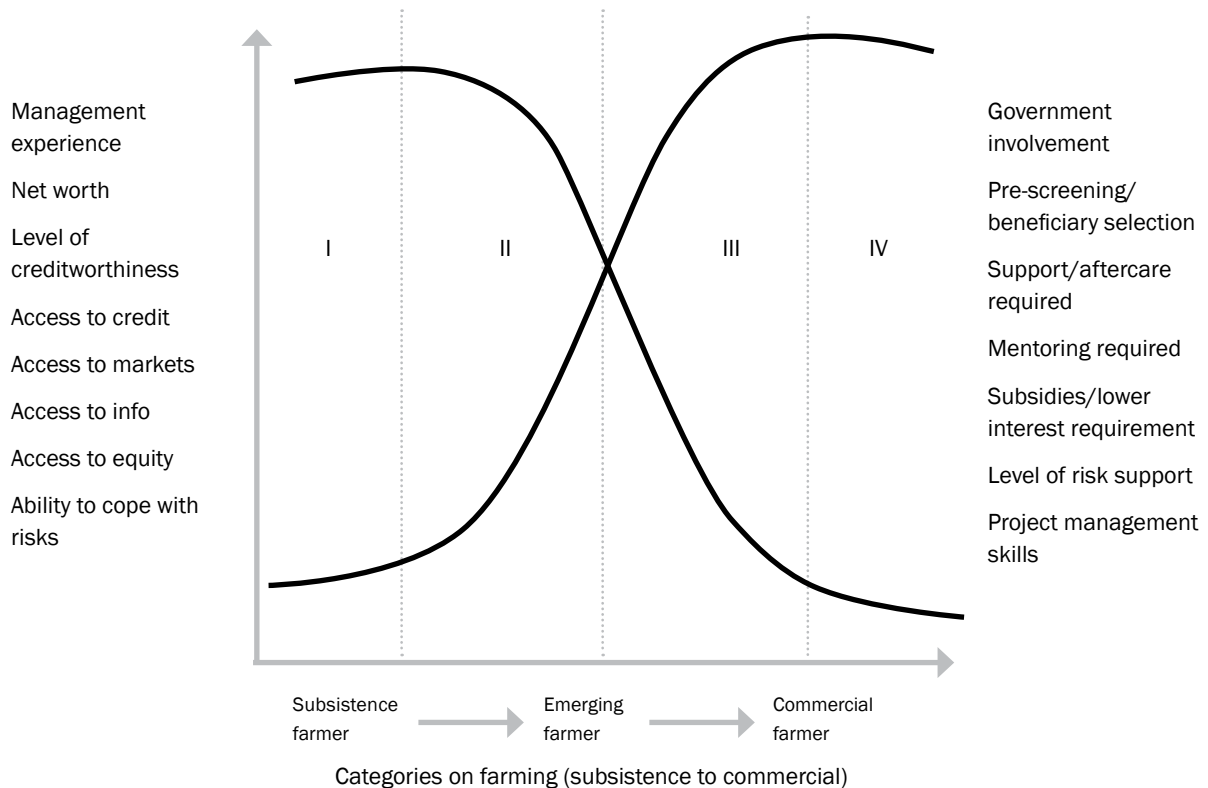
Also shown on the figure is the operational diversity of commercial small-farmers with varying levels of net worth, creditworthiness, management experience, support and mentoring.

One also has to separate the term ‘small-scale’ commercial farmers from true commercial farmers, which were referred to earlier. The issue is not only about size or the relative intensity of management, it is about turnover. The small-scale commercial farmer might have a turnover of R100 000 per annum but he produces for a market and has a decent living. In fact, according to Hall (2008) the majority of commercial farmers are in the lower level of the commercial group with more than 50% having a turnover of less than R300 000 per year.

Key observations from the agriculture and agribusiness sector

The agriculture and agribusiness sector, on the whole, has been affected by factors that are within and outside the sector. The main factors within are related to the changes in supply chain management and in overall

Figure 1: The different groups of small-scale farmers



Source: Louw (2008).

input and output markets. The most noteworthy exogenous factors, however, are natural events (e.g. climatic conditions) and macro-economic performance factors (e.g. population increases, exchange rate fluctuations, climatic factors, etc).

- *Structural reforms.* Following the end of apartheid and its related sanctions in 1994, South Africa became integrated into the global economy and this, among other reasons, contributed to the structural changes that the country has undergone since then. After the removal of marketing boards and market controls, the fundamental structural change was the shift from stagnant state-controlled agricultural markets to a vibrant and open-market orientation. Consequently, these developments have led to a shift from low-value basic food crops to high-value products intended for the export market. While the commercial sector was geared for this development, emerging smallholders became exposed to a new environment with no prior experience and no government support.

The World Wildlife Fund (WWF 2010) reported that with a focus on the export market, South Africa became a net importer of certain important food types e.g. wheat. In fact, South African food markets became exposed to cheaper imports, supplied at below local production cost, from developed countries with large farm support programmes. However, the local smaller farmers did not have the capacity to compete with these subsidised products.

- *Increased risk in agriculture production.* The removal of the marketing controls and participation in export markets left farmers exposed to fluctuations in the free market systems of the domestic and international markets. These fluctuations increased the risk for agricultural production, especially when changes in the market were not particularly in favour of farmers. In most cases, when fluctuations have a negative effect, small-scale farmers are the hardest hit, for reasons that include lack of risk assessment and mitigation capacities. However, even with positive effects, small farmers also tend

to miss out on the benefits because of lack of access to information and capital to benefit from the opportunities.

Additionally, agriculture has also experienced increased risk from extreme climatic conditions such as droughts and floods. These events intensify the risk for crop damages and livestock losses and while commercial farmers have formal and/or informal risk mitigation strategies in place to cope, it is not in the culture of the small-scale farming sector to provide for and manage these weather anomalies. They do not always understand the concept of risk mitigation and require some support and capacity building to save for a bad season, to diversify, to cope with sound cash flow management and also with information.

- *Growing population and modernisation.* The South African population is growing at approximately 2% per annum (WWF 2010), thus implying that food supply must increase using the same or fewer resources. Post-apartheid reforms have given rise to increased wealth due to the expansion of the country's middle class (measured by the LSM – living standard method) which reportedly rose by about 30% between 2001 and 2009 (BFAP 2011). Most of this middle class reside in the urban areas and lead modern lifestyles resulting in changing consumption patterns. However, while the agrifood market has been restructured and modernised to meet changing demands, farm-level restructuring has been left behind. Farm-level modernisation requires some infrastructural improvements, *inter alia* roads, adequate water supplies, irrigation, greenhouses, cooling tanks, etc. Some of these improvements require on-farm investments, which emerging small-scale farmers are unable to make, particularly due to limited income or access to credit. Other improvements, such as road and communal irrigation infrastructure, are generally the responsibility of government. However, being located in the rural areas, where infrastructure development is limited, commercial small-scale farmers often experience difficulty in participating in the modern markets as a result.

Intensification of farming

According to the WWF (2010), South Africa has less than two-thirds of the commercial farms it had in the early 1990s. Many of the farms have merged into larger

farming units to achieve economies of scale. However, production increased after deregulation (Sandrey et al 2011) indicating a shift towards large-scale, high external-input intensive farming. As such, there was increased use of irrigation, fuel, fertiliser, mechanisation and genetically modified (GM) seed. Fertiliser and seed companies have moved in to fill the void left by poorly-resourced government extension services to provide private advisory services. These companies tend to provide their own extension personnel to build relations and maintain contact with farmers, thus creating a service to sell and promote more of their products.

Closely linked to these developments is the growth of the food retail industry. The main model of choice for retail companies is contract farming or off-take agreements. Contract farming involves the provision of inputs and technical advisory services in exchange for a specified quality and quantity of output. This has led to increased concentration of input and output companies relative to farmers in value chains. However, as the supply chain is skewed towards these agribusiness and food retail companies, this has brought about some power imbalances due to the companies getting a larger share of gains.

Key policy messages

While some of the following policy messages are not entirely new (e.g. notions such as infrastructure investment, facilitation of improved access to credit markets and access to market information), it is essential to emphasise the importance of these factors to ensure sustainable policy development. A particular focus on the smallholder or emerging farmer means there is need for continued specific policy directed to this group of farmers, such as credit at concessionary rates and a more concerted effort in training and capacity building of the farmers. Despite already knowing what needs to be done, there is a growing realisation that new ways of thinking have to be applied to successfully come up with sustainable approaches.

- *Understanding the heterogeneity in the smallholder sector.* Understanding the variation in the smallholder sector is essential. It calls for a differentiation in the policy process for the distinct types of small-scale farmers. Clearly, with special needs for the different groups of smallholder farmers a uniform solution would not work in addressing such heterogeneous needs. Understanding these

differences prompts other questions for the policy makers: Should all subsistence farmers be made to migrate to become commercial farmers? Is this what all smallholder producers want? Can a farmer remain on a subsistence level and yet still be successful? What are or should be the policy objectives at each level of the small-scale sector? What are the types of support systems required at the different levels? It should be understood that subsistence farmers do not necessarily want to become small-scale commercial farmers and are happy with their current circumstances. They may be successful, given their own level of needs and requirements, and can therefore not be forced to migrate from subsistence farming – where they are in a comfort zone and happy – yet they might still require some basic support and infrastructure. The needs must be determined for all the different levels at policy level. The support at basic level could be for vital extension services, infrastructure, the provision of transport, schools, water, sanitation etc. For the small-scale emerging commercial farmer, however, support systems could range from the provision of an improved extension service, supply of water for irrigation, access to cheaper capital, access to markets, more market information, assistance regarding packaging houses and collection points, assistance with forming co-operatives, information on risk management and other management, product and marketing support.

- *Development of inclusive business models.* The involvement of smallholder producers is on the national development agenda and for business to contribute towards the national agenda they will be required to work with the smallholder farmers. However, there is a need to consider different and sound business models based on a true understanding of the smallholder sector, the markets and the roles of all the players in the value chain (including that of the public sector). Procuring from smallholder farmers has always been a challenge for large businesses in terms of organising supply, quantity, consistency, quality, safety and traceability, because to ensure all these involves high transaction costs. Successful procurement from smallholder farmers has often involved working with specialised intermediaries who understand both smallholder farmers and the agribusiness industry. For this reason, reinforcing rather than ‘cutting out the middleman’ may be the most sustainable strategy.

Intermediaries have generally been found to be key in bridging the realities of small-scale production and modern organised markets.

For their part, the smallholder farmers believe that collective action remains important for their increased participation in dynamic markets, although existing producer organisations have a mixed record for providing members with access to the markets. Co-operatives are theoretically an option, but much more capacity building and support is required to make them successful and sustainable. More government assistance is required especially in the case of new co-operatives where the relevant experience and management capacity is lacking and control systems are not in place. Producer and commodity organisations can, however, make use of policy influence on business strategy as well public policy to drive their agendas.

- *Collaborative arrangements.* Although business models can range from relatively simple changes to procurement policies through joint ventures, the use of multiple actors from both public and private sectors has proved to be a successful foundation. Working with many stakeholders can open up space for dialogue, build an understanding of agro-food market trends and drivers, develop future scenarios and define entry points for action. Multiple stakeholders interact directly and indirectly to shape the structure of modern agro-food market chains.

The role of the public sector and the private sector is changing towards facilitating business partnerships between smallholder farmers and other actors in the supply chain. What is required is a set of new policy skills and instruments for government to carry out economically rational and socially valuable market interventions in the supply chain.

New arrangements to enable dialogue among public policy, business, support services and the farming community are also required to secure fairness in trade and sustainable, inclusive agribusiness. These arrangements would ideally involve collaborations between:

- i. *trained and organised farmers* – who understand processes and contribute meaningfully towards dialogue;
- ii. *a receptive business sector* – that anticipates the benefits and exhibits willingness to work with smallholder producers;

- iii. *conducive public policies and programmes* – that create an enabling environment for business and smallholder farmers to work together.
- iv. *good research, extension and support services* – to provide capacity on above initiatives for farmers.

At the core of these collaborations is the need for leadership and specialised partnership facilitation that supports arrangements between the groups and ensures their objectives are met.

Conclusion

Changes, particularly in the agricultural markets in South Africa, have tended to have a more negative than positive impact on small-scale producers. This reinforces the need for continued policy efforts to improve the small-scale sector. However, to successfully achieve this, a new way of thinking is required. This includes an in-depth understanding of the realities and complexities within the small-scale sector before embarking on any specific policy options. The participation of both private and public sector is advised, thus signalling a shift from the traditional allocation of the role of development solely to government. Finally, the role of middlemen in linking small-scale farmers to the markets remains important.

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Big business for small farmers: the case of Venda avocado growers

Lusito D. Khumalo



Abstract

Inclusive business models in South Africa are possible through the identification of a strategic 'fit' between large agribusinesses such as Westfalia and smallholder farmers. A complementary relationship was found in an early market window when small-scale avocado farmers in Venda aligned their production activities with Westfalia, one of the largest avocado producing and exporting companies in South Africa. The farmers had a competitive advantage in climate by supplying the first fruits of

the South African season, thus playing an important role in the reduction of imports from Spain during the off-season. A combination of factors was instrumental in the success of one of the ten farmers that participated in the project. Economies of scale, efficiencies in logistics and high fruit quality were found to be key success factors. Additional criteria included the young age of the farmer, his low risk aversion, early adoption of new technology and a passion for farming. A business model was developed from the successful farmer indicating the potential for more smallholder farmers to profit from participating in big business in the South African avocado industry.

Introduction

Poverty is a dominant feature of small-scale agriculture in Africa caused to a large extent by resource constraints and technology stagnation (Ghatak and Ingersent 1984). Since the dawn of democracy in 1994 many attempts made by the South African government to improve the level of participation of smallholder farmers in mainstream agriculture have met with limited success. One example is a commercialisation model, initiated by government in 1995, which consolidated smallholdings into larger economic units with a government-appointed contractor to prepare and plant the land on behalf of the farmers. The objective was to realise economies of scale with the condition that the service provider transfers his farming skills over time to the farmers. This model failed, firstly because it reduced farmers to mere observers of operations on their farms; and secondly, the huge cost of these external operators on government made them neither justifiable nor sustainable in the long term. Changes in policy that led to market liberalisation and fiscal and governance changes eliminated support to small farmers including the removal of subsidies (Hazell & Diao 2005:29; Vermeulen et al 2008).

The functioning of the agro-food chains was affected by the dismantling of state-led enterprises (such as marketing boards) due to privatisation and deregulation policies. In addition, the chains were affected by the introduction of new organising principles that install alternatives for monopolies or oligopolies (Vellema 2011). Prior to deregulation farmers had only to concern themselves with on-farm production and were not involved after the farm gate closed. Beyond that, the co-operatives were responsible for collecting, transporting and marketing members' produce. Similarly, the procurement of farm inputs such as fertiliser, seed and chemicals was the co-op's responsibility, which bought inputs in bulk for all members at lower prices by exercising bargaining power.

Although subsistence agriculture plays an important role in food security, the need for a quick transition by smallholders to a commercial level has become a priority if they are to become sustainable in the long term. On-farm income derived from small-scale avocado production plays a significant role in ensuring the sustainable livelihoods of farmers in Venda. A recent study comparing small-scale irrigated and dry-land farming in Venda found that 83% of food-secure households had irrigated farms compared to 53% under dry-land production (Oni et al 2011). This implies that small-scale farming contributes

positively to household food security and irrigation has a positive effect on farm output. For instance, family decisions such as adding another family member or sending a child to school/university depends on the financial performance of the avocado orchard. A farmer who depends on the performance of an orchard for their entire livelihood must have sufficient land and good yields to secure a gross farm income to cover the costs of production, farm debt and the living requirements of the family (Whalberg, 1940).

The South African avocado industry has a market value of about R400 million with the South African Avocado Growers Association (SAAGA) as the lead association representing 85% of all producers, small and large, in the country (Perishable Products Export Control Board (PPECB) 2009). Westfalia Fruit Estates has a 50% market share of the avocado industry in South Africa. It is arguably the largest producer and exporter in the country with a vertically integrated business holding structure of farming operations, processing and marketing companies. Small-scale farmers, some of whom are members of SAAGA, account for less than 1% market share and declining (Radzilani 2011).

This paper provides evidence of a private-sector led initiative of inclusive business between a large agribusiness firm and smallholder farmers. The following sections discuss the research methodology conducted in the study, and then describe the chosen study area and the capabilities of the area in supporting the development of pro-poor value chains. This is followed by a discussion of the results focusing on the financial feasibility of the enterprises, and finally a summary and conclusion is presented.

Research methodology

In 2009, Westfalia initiated a smallholder farmer development programme aimed at the strategic inclusion of small farmers along the avocado value chain. This was given impetus by an increasing demand for seedling trees by smallholders from communal farms in Venda at the Westfalia nursery. Twenty years ago, Westfalia started holding farmers' days to share technical information on crop husbandry and marketing – a relationship which provided the farmers with market intelligence currently lacking in the public extension service. The aim was to address the industry problem of immature fruit landing on the market floor at the Johannesburg Fresh Produce Market in the early part of the season. Most of this fruit

comes from resource-poor growers in Venda whose poor-quality fruit cannot compete with commercially farmed fruit, so to fetch higher prices they are tempted to harvest immature fruit to be first in the market at the start of the new season.

To make these growers more competitive by improving their fruit quality, and to demonstrate the financial benefit of harvesting fruit later in the season rather than earlier, the consumer dimension was introduced to their farming: to always focus on meeting the needs and expectations of the end consumer.

Appendix A below shows two supply chains. The pre-intervention model indicates the situation prior to the project: the traditional supply chain of the farmers, which is characterised by many middlemen and a high cost structure. However, the shortened post-intervention value chain indicates the benefits to smallholders when Westfalia eliminated the five middlemen and substituted them with three of its internal divisions to perform functions for maximised profit. Small farmers gained from the improved efficiencies and reduced costs after integrating the manufacturing functions during the transformation of raw material into high value products.

The biggest gain for the growers was the certainty of producing for a market – an especially important factor for pre-intervention farmers – after following a 'supply-push' model of growing for an unknown market. In the post-intervention model, farmers were introduced to the 'demand-pull' model where product was procured in a contract arrangement. It is estimated that 78.5% of the annual production of fruit and vegetables sourced by agribusiness companies for processing is procured under some form of contract arrangement, with the remainder supplied through other channels such as the open market, own estates, agents or imports (Vermeluen et al 2008). This model eliminates the marketing problem that constrains many smallholder farmers.

A survey of 60 farmers was carried out through focus-group interviews. A value chain analysis was then conducted that revealed a number of deficiencies pointing to an immediate need to intervene at various stages along the value chain. Technical and business training was conducted concurrently with operations to improve fruit quality to control blackspot (*Cercospora purpurea*), a fungal disease of economic importance, which causes black spots on the surface of the fruit, reducing its aesthetic value. The challenge of the spray project was to

improve fruit quality through applying four copper sprays over 21-day intervals from fruit set until harvest. The improvement of fruit quality through chemical means was intended to enable market access of smallholder farmers to high-end markets. A feasibility study was undertaken and a financial model developed.

A business plan was then compiled with funding secured from the Woolworths Enterprise Development Fund. The terms were at a reduced rate of prime less 2%. Surety and administrative control was guaranteed by Westfalia. A contract was signed between the three parties, i.e. farmers, Westfalia and Woolworths, committing each partner to specific obligations. Farmers were to become willing borrowers of the loan; Woolworths was to lend the money and provide off-take for the fruit; and Westfalia was to mentor and manage the repayment of the funds.

A pilot project comprising ten farmers located across three geographic areas was then initiated. The farmers are on communal land under the jurisdiction of a local chief and traditional council. Each farmer has indefinite user rights in the form of a Permission to Occupy (PTO) that requires an annual fee of R20 per hectare. This permit gives the farmer the right to farm the land and build a homestead. The PTO is tradable between users and is usually transferred from parent to offspring when the parent dies.

The rationale behind selecting different sites was to determine the time of fruit maturity to assess when the fruit arrives at the packhouse. This timing factor would also point to a potentially profitable area in which to invest that would complement supplies from Westfalia farms. Given the age of most of the farmers, many of whom started farming after retirement, this change presented a serious challenge. For an inclusive relationship to be sustained between the parties, Westfalia needed to find a strategic 'fit' along the value chain that would complement and add volume to its supply chain for both local and export markets. A business case was made justifying the tangible benefits of profit potential and the attendant benefits of transformational agriculture in the sector.

Study area

Vhembe District (incorporating the former Venda, parts of the former Gazankulu and parts of the former Soutpansberg district, bordering Zimbabwe in northern Limpopo) has a large, concentrated population of over 1.24 million.

The district has a high agriculture potential with a warm sub-tropical climate and deep well-drained red soils that are ideal for avocado production. Smallholdings range between one to ten hectares per household, although it is not uncommon to find some families with consolidated units of up to 50 hectares. The farming method is predominantly extensive (low or no inputs) under dry land conditions. Production is by default organic, since there are no synthetic inputs such as fertilisers and chemicals used in production as the farmers are resource-poor. As a result, output is generally low and of poor quality. Since the 1980s, the farmers have been supplying the low end of the market (hawker and municipal markets) due to poor quality and a lack of market knowledge.

The introduction of an export focus created more employment opportunities in the area as inputs (capital, labour and raw materials) were sourced locally and small farms became more productive due to the efficiency of allocations or better resource utilisation (Samen 2007). Private sector-driven initiatives of inclusive business with smallholder farmers provide both social and economic benefits for the sector and the country as a whole. Recently, interest has emerged among a group of investors – private equity funders, venture capitalists, financial services firms – to consider “impact investment” in developing countries (Gillam 2010).

Results

Graph 1 in Appendix B indicates that farmer no. 8 was the only producer with a reasonable margin. Most of the other farmers had turnovers below production cost, indicating that their farming units were too small (i.e. below the viable economic unit size), which resulted in losses for those enterprises. Graph 2 in Appendix B again shows that farmer no. 8 (Nyambeni) had the lowest costs of production compared to the group. This was because he produced the highest volume of 35 000 cartons and was able, therefore, to spread his total costs over a larger volume. This resulted in a low net cost per carton at R8.18.

The financial results are depicted in the Income Statement in Appendix C. Turnover was 26.2% less than budget due to lower prices than anticipated. Actual price per carton was R24.98 compared with the budget price of R41.87. Low prices can be attributed to the high supply of fruit in the market. Farmers need to be aware that farming is inherently risky and one way of mitigating

price risk is through negotiations for a minimum price guarantee with customers. In this way, a minimum gross farm income can be estimated. A second way to mitigate price risk can be to diversify markets to avoid dependence on traditional markets. Costs of sales were 19.8% higher than budgeted due to higher costs than anticipated. Gross profit was lower by 67% due to lower sales as a result of lower prices and higher cost of sales.

Profit after tax (includes interest) the actual was lower than budget due to higher interest incurred than what was budgeted for. The project made a small profit as seven of the ten farmers had a positive return i.e. their production left little or no return as profit. Only one farmer who had sufficient volumes was able to realise a good profit. Two of the farmers made a loss and one was only able to break even. This meant a 70% success rate in the first year which, by all accounts, was commendable since a profit was made in the first year of operation. However, since the initial aim to better their returns of their traditional supply chain was not as much as expected, there was a contrary reaction by some of the farmers to this outcome. The following reasons may account for the disappointing results.

- *Unusually high volumes in the market.* As it was an ‘on-year’ (high yield) there was an over-supply of fruit in the local market resulting in lower than anticipated prices. However, the net income per carton was still favourable at R17.50 (excluding waste), yielding a good return. Net income refers to income after all costs have been deducted, including production, packing, transport and marketing.
- *High production cost* The financial results indicate that the spraying costs were high due to the high cost of copper required for the effective control of blackspot. During the initial stages when workers were not familiar with handling the product there was a lot of wastage.
- *Low labour productivity.* The project created 60 jobs for men and women who were previously unemployed. The productivity was very low, both at initial stages during picking and packing, despite the training that was given and payment of a minimum wage. The minimum wage was R1300 per month. The South African avocado harvest season starts from the last week of March until the end of September and workers are seasonally employed.

- *Few trees and long distances to farm.* For each of the farms that made a loss the reasons relate to either of the following two factors. Firstly, it was found that some farmers produced small volumes to offset their production costs and, as a result, the cost of copper spray could not be recovered. Secondly, two of the farmers were located too far from the rest of the group and the transport costs for the tractor and labour were prohibitive over the long distance.

Conclusion

The avocado business has inherent commercial risk that cannot be accurately predicted. Although the managing partner of the project made the best possible effort to implement the spraying exercise cost-effectively, and sought the best possible prices for the farmers from various markets, the result did not meet some of the farmers' expectations. This was despite having made a R300 000 profit in the first year, which is unusual for new businesses to achieve. One successful farmer accounted for 59% of the total volume of 300 tons supplied by the group to Woolworths and other markets. Lessons learnt from this research demonstrate a sound and viable business model of inclusive business in the South African avocado industry that can be replicated in other fruit industries.

Development practitioners, drawing up future support programmes, need to plan sufficiently before commissioning projects. That entails considering the social, physical and financial aspects of the project. Arising from the lessons in implementing this project was the need to balance the various aspects with enough funding to implement the whole scope of the project. Since all the activities could not be funded, the project was scaled down to the bare minimum which put pressure on resource allocation to other activities.

Secondly, there needs to be a contingency plan. The profit potential was decreased due to the escalation of production costs, which included minimum wage and fuel prices. Price uncertainty was also a factor. Transport and logistics was found to be one of the major cost drivers of the project. This means the selection of the target farmer population, the proximity of the farms to the main road, to water sources and to each other determined the cost of farming operations and, by extension, the total cost of the project.

Thirdly, on the social dimension of the project, managing expectations of smallholders is vital. Drawing from this experience, when farmers got involved in the project they had high expectations. This was found to have come from the involvement of Westfalia which created an impression that since a large player in the avocado industry was assisting them, there would be little risk. As things turned out, Westfalia could not absorb all the risks that the market presented, and most of the growers felt they were better off going back to their traditional way of farming.

The level of literacy of farmers was too low for them to understand the complexity that commercial avocado farming presented for them. Their comprehension of the value chain cost factors, and how they interrelated in the process of value creation presented a serious challenge when they reviewed their financial statements. Practitioners, therefore, should keep in mind the business training needs of beneficiaries along with their understanding of the management's responsibility for implementing these kinds of projects.

We can conclude, therefore, that smallholder farmers who intend to enter the avocado sub-sector should take cognisance of the high entry barriers of fixed costs peculiar to this industry. The project has shown that any farm that is less than ten hectares in size with a plant population of fewer than 200 trees per hectare cannot be viable. Furthermore, the age of the farmer, his attitude in adopting new technology and willingness to experiment determine the level of success. The effects of farm size on profitability were evident, indicating the importance of economies of scale and scope as critical success factors. These economic factors are more important than the social factors because they determine the viability of the enterprise. Social factors, although equally essential, can be overcome through proper selection of farmers.

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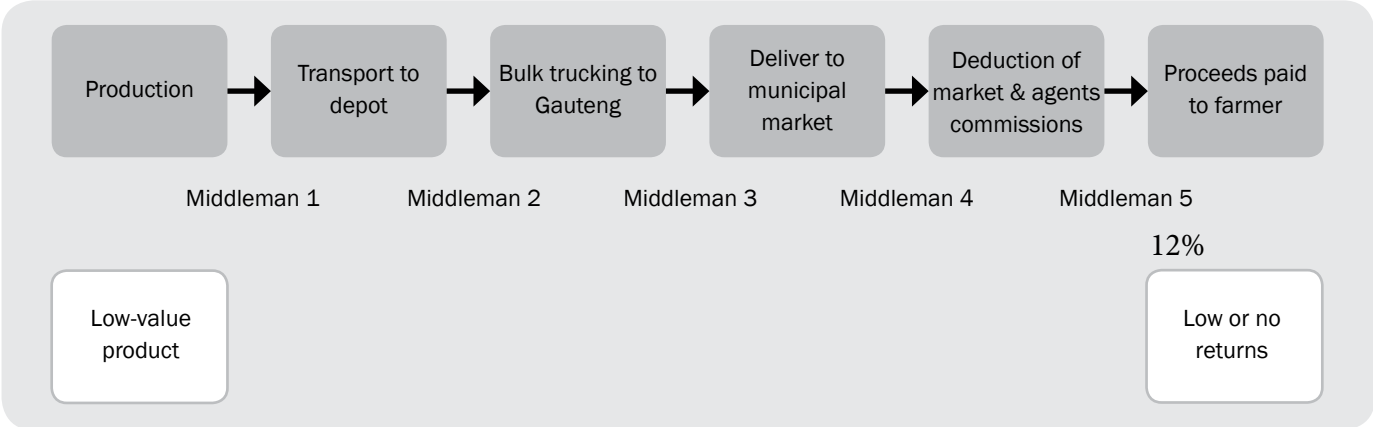
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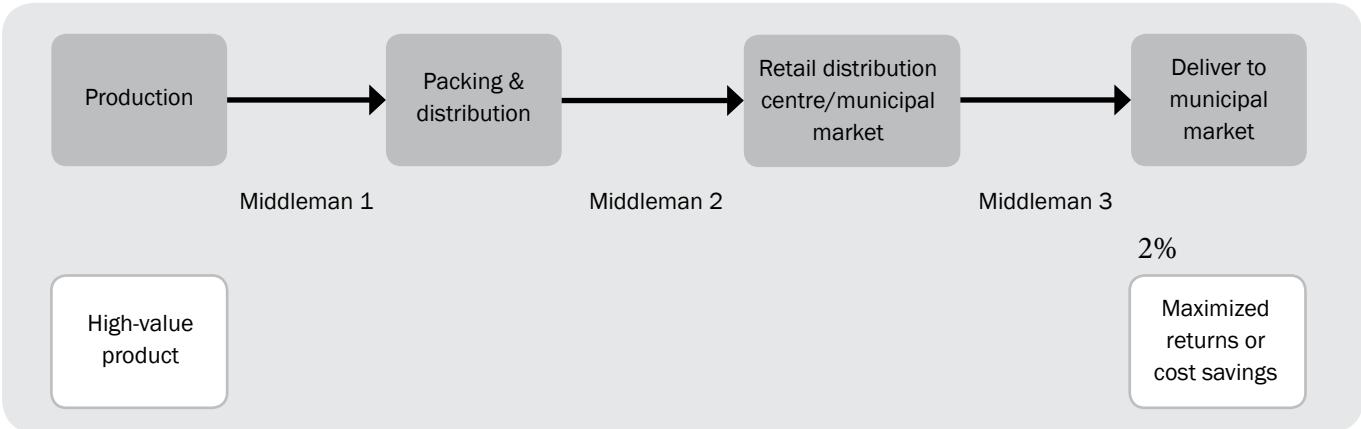
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Appendix A: Pre- and post-intervention value chains

Pre-intervention value chain

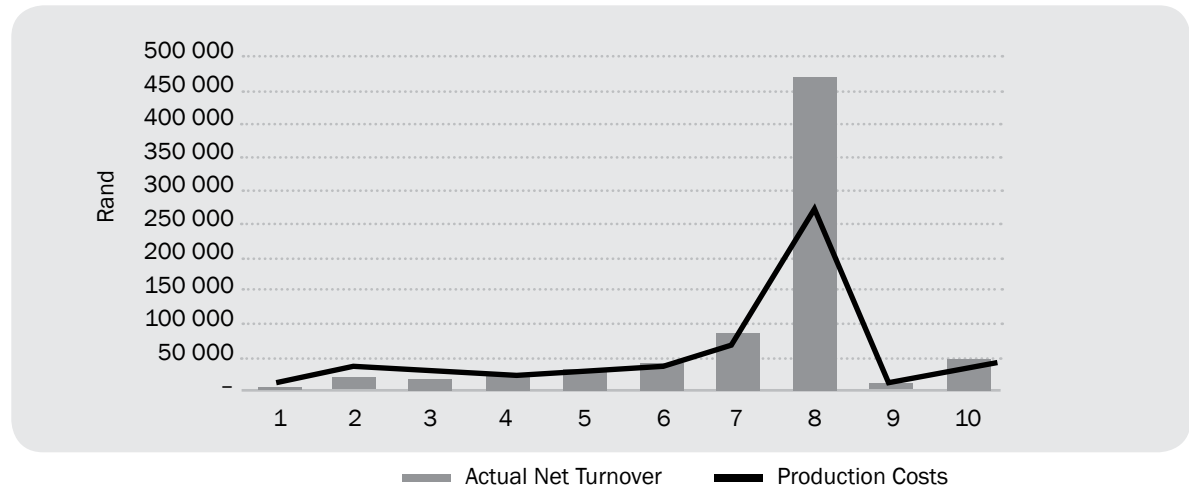


Post-intervention value chain

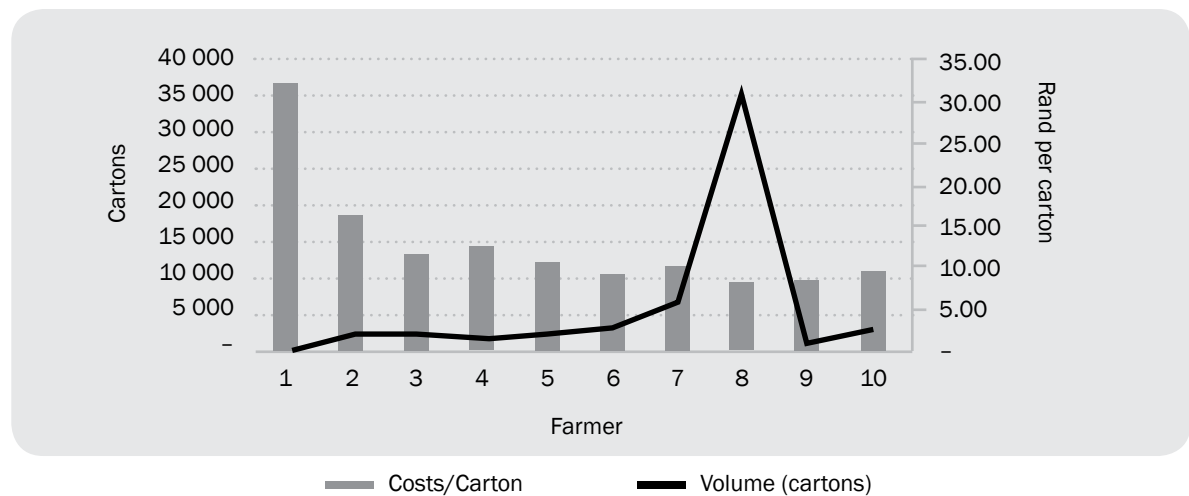


Appendix B: Production costs and turnover

Graph 1: Venda production cost versus turnover



Graph 2: Venda costs per carton versus volume produced



Appendix C: Results

TABLE 1. WESTFALIA BLACKSPOT SPRAY PROJECT			
EARNINGS STATEMENT FOR THE MONTHS ENDED 30 JUNE 2010			
	ACTUAL 2010	% VARIANCE	BUDGET 2010
GROSS SALES	1 507	-26.2%	2 044
DISCOUNT			
NET SALES	1 507	-26.2%	2 044
COST OF SALES	(1 045)	-19.8%	(838)
DISTRIBUTION EXPENSES - EXPORT			
DISTRIBUTION EXPENSES - LOCAL	(99)	4.9%	(104)
GROSS PROFIT	364	-67.0%	1 102
OVERHEADS			
OPERATING PROFIT	364	67.0%	1 102
MEDICAL AID PROVISION			
SUNDRY INCOME/(EXPENSE)			
PROFIT BEFORE FINANCE CHARGES			
INTEREST RECEIVED/(PAID)	(47)	-24.8%	(36)
PROFIT BEFORE GRANTS	317		1 066
GRANTS AND DONATIONS			
PROFIT BEFORE TAXATION	317	-70.3%	1 066
NORMAL TAXATION			
PROFIT AFTER TAXATION	317	-70.3%	1 066
Cartons (4 Kg Equivalent)			
EXPORT			
LOCAL	47 870	-4.3%	50 000
FACTORY	12 487.41		
TOTAL	60 357	20.7%	50 000
PRICES			
Price per carton	24.98		40.87
Net return per carton	5.25		52%
RATIOS			
GROSS MARGIN	24%		54%
PAT MARGIN	21%		52%

Experiences and insights on smallholder farmer value chain integration

Mandla Nkomo



Seven lessons to share

TechnoServe South Africa is part of a global organisation with over 40 years experience in working with entrepreneurial men and women in the underdeveloped parts of the world, giving them the support they need to create scalable enterprises. The small enterprises are assisted to participate fully in their sectoral value chains, thereby providing employment, earning income and impacting local economies. In 2010 such work targeted in excess of 2 700 businesses which, in turn, had business dealings with over 280 000 smallholder producers. This resulted in 1.5 million people benefitting economically.

This work continues to grow, globally and more so within the South African context of a society in the throes of substantial socio-economic transformation. TechnoServe South Africa has been engaged within South Africa since 2003. Their chosen practice areas have been SMME development, agricultural value chain development, and local economic development.

These practice areas have led TechnoServe to develop and run programmes that assist rural-based businesses to develop business plans, provide specialised training and mentorship, facilitate linkage to markets and finance, as well as virtual incubation and enterprise acceleration

activities. Since 2007, more than 500 small businesses have been supported within these programmes. These activities have given insights into the inner workings and challenges of rural-based small enterprises and have provided lessons on how to package support programmes for such businesses.

Within agriculture, TechnoServe has focused on working with all actors in the agro-food value chains in order to sustainably link farmers to secure markets and so facilitate smallholder ownership further up the value chain. These programmes have worked with emerging farmers in Mpumalanga, Limpopo and KwaZulu-Natal, which largely constitute black smallholders in South Africa. Lessons have been learned in the context of working on issues in the emotive land reform and redistribution space, as well as former homeland farming areas.

Local economic development initiatives have indicated that possibilities for building integrated economic activities within specific geographies exist. This can result in opportunities for smallholders and other small businesses to be integrated into the supply chains of larger businesses. It is these lessons that TechnoServe South Africa seeks to share with a larger audience of development practitioners and academics involved in pro-poor development and leadership.

We have learnt the importance of fully understanding the context in which we work: clearly identifying whom we work with; making sound choices on which value chains make sense to work with; recognising the inherent knowledge and skills gap and how to deal with it; being creative in addressing the perennial access-to-finance challenge for small holders; dealing with funding issues for the interventions themselves; and choosing our battles.

Lesson 1: Understanding the context

The last census of South African agriculture (Statistics South Africa 2007) and various subsequent surveys indicate a rather interesting state of affairs that must affect the way TechnoServe understands smallholder farming in South Africa. Although there are an estimated 2.5 million smallholder farming households, there are only about 35 000 commercial farming units in the country. These commercial farming units collectively operate on about 14 million hectares of farmlands, while their smallholder

counterparts are on approximately 3 million hectares of farmland. Production statistics further indicate that 95% of South Africa's farming output originates from the commercial farming sector. This sector in most respects is globally competitive both in terms of uptake and use of the latest agricultural technology (e.g. precision farming, improved varieties and mechanisation), as well as productivity (yields per hectare, quality specifications, global certification compliance and price competitiveness).

This context is not accidental but is a result of more than a century of legislation and governmental policies, such as the 1913 Land Act, apartheid laws and, of course, the modern context of land reform such as restitution, tenure reform, redistribution and AgriBEE.

The impact is that agri-food value chains in South Africa favour sophisticated commercial farmers, and generally crowd out smallholder farmers. Our interventions, therefore, must seek to give smallholders a fighting chance to build long-term sustainability within these highly competitive agro-food value chains. Interventions that are oblivious of this context and current dynamics will not add value to smallholder farmers' aspirations.

Lesson 2: Defining with whom we work

Most practitioners in the development space constantly have to confront issues of defining their target group as precisely as possible. Our experience has been that this is even more important in the agricultural context. In other areas, such as SMMEs, there is legislation that defines small and medium enterprises on the basis of turnover and employees, which somewhat provides a reference point. However, the question of who is a smallholder farmer in South Africa is a matter less agreed upon.

A useful first filter would be a generic understanding of what smallholders are: "The term 'smallholder' refers to their limited resource endowments relative to other farmers in the sector. Thus, the definition of smallholders differs between countries and between agro-ecological zones." (Dixon, et al. 2004) The issue of resource endowments relative to other farmers is a relevant one in South Africa, as the previous discussion on context has shown.

On the basis of this understanding of resource endowment, the latest draft discussion document from the

Department of Agriculture, Fisheries and Forestry (DAFF, 2011) comes up with a useful starting point. Three groups: SP1, 2, and 3 are defined, based on resources:

- i. the SP1 group is at the top of the pyramid, having access to own land, some farming equipment, own permanent labour of at least two and demonstrable access to markets;
- ii. SP2 has access to land, maybe leasing equipment and only employs seasonal labour; and
- iii. the bottom rung is occupied by the SP3 group on leased land, share cropping or contract farming with no hired labour.

This is a useful filter, although it must be said, it is driven by DAFF wanting to offer specialised support to the different groups, and might not fit entities with a slightly different agenda for smallholder farmers.

The views of the UK Department for International Development (DFID) on livelihoods, and livelihood assets are also a useful set of tools for the exercise of determining with whom to work. Analysing the South African smallholder in the vulnerability context and through the lenses of the five capital assets (natural, social, human, physical and financial) these producers operate under help to sharpen their disaggregation exercise.

TechnoServe's strong private sector influences have led them to a point where they feel they are probably better equipped to assist the SP1 and SP2 smallholder farmers. This is driven by the inherent skill sets in this organisation and the matrices used to measure success and what one could term their 'theory of change'. No one organisation can be all things to all people: hence there is a need to define who we work with.

Lesson 3: Making choices around value chains or products

Another important choice to make is about which products or commodities to promote for the specific participation of smallholder farmers. The above-mentioned issues of understanding the context and making a judgement call on who to work with are both prerequisites for making an informed choice about value chains and commodities.

It is well known that certain value chains are so dominated by commercial farmers and agribusiness that smallholders, acting individually, cannot break into the sector. Also the critical mass of a combination of assets and technologies to manufacture products for demanding, and often low-margin markets, is in itself exclusionary to smallholders.

TechnoServe has learnt that per commodity or sector, a proper multi-level gap analysis is required. It is important to determine the level of gaps with respect to quality requirements and access to inputs. Within this cluster, questions need to be asked about farmers' abilities to:

- i. access correct seed varieties;
- ii. familiarise themselves with the specific crop husbandry requirements;
- iii. access and use fertilisers and other crop nutrient products; and
- iv. meet minimum quality requirements and understand these requirements from a market perspective.

The next relevant tier of gap analysis relates to access to farm infrastructure required for successful farming of the specific commodity. Such on-farm infrastructure includes:

- irrigation and tillage equipment (tractors)
- storage and produce handling facilities (storage sheds and packhouses)
- logistics in the form of cold-chain friendly trucks to deliver produce where it is required.

Any gaps, even at the barest minimum, should impact on commodity choices for producers, otherwise typical interventions will be required to bridge the gaps.

In our chosen target group of farmers, business skills are an essential requisite. Ability to access key business information such as market prices, and historical trends and data is important. Furthermore, the ability to operate under medium- to long-term business plans is essential, as is basic farm and business record-keeping. These issues are important as they have an impact on access to financial services such as loans and crop insurance.

Lesson 4: Bridging the knowledge and skills gap

The basis of the TechnoServe smallholder farmer development model is a combination of aggregation strategies, skills development and improvement. The debate is always about which method is most effective for improving specific skills levels among smallholder farmers, classroom-based approaches or on-farm coaching and mentorship. TechnoServe's experience has taught that it is not an either/or scenario. It is important to tailor learning in such a way that it fits into what smallholder farmers do – which is farming. Disruptive approaches that focus on parachuting in 'experts' to lecture farmers and taking them away from their fields, quickly lead to resentment and result in limited assimilation of information. In the same vein, on-farm mentorship approaches that are parochial and invoice-driven also end up only benefiting mentors rather than smallholders.

We have attempted to adopt a learning-by-doing approach to bridge the knowledge gap. Classroom-type activities are always linked directly to activities on the farm, and will often be delivered linked to a field day or similar event. An example would be teaching record-keeping around a specific crop that the farmers are about to plant, or in which they are already involved. Reinforcing and offering practical advice is achieved by making use of incentivised mentors, commonly referred to as 'Principal Farmers'. These are mentors who have proven product and area knowledge, and who are contracted to provide support to smallholders throughout the growing season. Their remuneration is directly linked to specific production targets being met. In this way, the mentors are unlikely to be superficially involved as they have some incentive.

Lesson 5: Solving the access to finance challenge

South Africa is in a fortunate position in that smallholder producers have a wide choice of funding sources for various aspects of their operations, at least superficially. The fiscus, through DAFF and the Department of Rural Development and Land Reform (DRDLR), makes annual provision for supporting smallholder farmers. Development Finance Institutions (DFIs), such as the Land Bank,

the Industrial Development Corporation (IDC) and the National Empowerment Fund (NEF) all have instruments that smallholders can access. Agencies of government such as Micro-Agriculture Finance Institute of South Africa (MAFISA), Small Enterprise Development Agency (SEDA) and National Development Agency (NDA) also support initiatives in the sector. The point is that there are more than adequate funds for certain kinds of activities in the sector.

However, closer inspection reveals that as at 2009 commercial banks, but not all the above-mentioned entities, dominate the funding of agriculture. As much as 70% of agricultural debt resides with the commercial banks and is largely loaned out to commercial farmers. DAFF and the Land Bank only contribute about 6% each to agricultural finance. This indicates a huge challenge to ensuring much-needed financial resources end up where they are most required.

TechnoServe's experience has indicated that they have to be innovative in unlocking all these funds for smallholder farmers. An aggregation mechanism of bringing a group of smallholders together, to produce similar products and receive tailored support, allows for a much better conversation with financiers. Bankers or funders, as a rule, do not have the DNA or the capacity to deal with 2.5 million smallholders, but groups of smallholders in the form of co-operatives or Section 21 companies are more attractive, and more so if there is a support structure around them and a clear line of sight to market.

TechnoServe has piloted "management companies", for this aggregation function by offering loan management services, market facilitation, technical and business support that ensure smallholders build business track records and local capacity to be sustainable and relate to the business world in the long term.

Lesson 6: Funding the intervention

TechnoServe, being an NGO, needs to raise funds to do the work dealt with in this article and, unlike our colleagues in other offices across the world, we are not targets for big international donors such as USAID, the Bill and Melinda Gates Foundation and DFID. This is a consequence of South Africa's somewhat deceptive 'middle-income' status which disqualifies us for funding for some development aid.

Our experience is that everyone – from politicians, business people, academics to philanthropists – wants smallholder farmers to be supported, and they often eloquently state this. However, the sad reality is that very few are prepared to pay for obviously needed interventions. This has forced our country office to be creative in raising funds from the private sector, private international foundations as well as tapping into government funding for our work.

As advocates for transformation in smallholder farming, we have had to understand the issues that concern both potential funders and mainstream smallholder farmers. In some instances, it is about understanding the BEE codes and making a case for budget allocations, either for 'enterprise development', 'preferential procurement' and sometimes for pure corporate social investment to fund smallholder value chain work.

Navigating tenders and requests for proposals with government must be undertaken in conjunction with more creative ways of tapping into the fiscus. Some departments are now comfortable in appointing NGOs as service providers to implement specific government programmes. A classic example is the Department of Health using NGOs to implement HIV/AIDS mitigation programmes when NGOs apply for state funding on the basis of business plans. This could be a *modus operandi* that the DAFF and DRDLR could adopt.

Lesson 7: Chasing your opportunities (marathon vs. 50m dash)

A final lesson to share is that supporting smallholders is a full-time activity which sometimes has rather long

incubation periods. TechnoServe's observation is that interventions designed to last less than three to five years are simply too short to have lasting impact. A marathon approach as opposed to a 50m dash would be more appropriate.

Achieving the right funding outcomes is also a critical activity. There is no formula for doing it. Some programmes can be planned and funded in weeks, while others can take up to a year of back-and-forth discussions before agreement to commence.

TechnoServe's approach is always to be at the cutting edge of knowing what is happening in the sector, to be adoptive of changing realities and to be open to collaboration with like-minded actors who put the interests of the producer first.

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Aspects of the citrus value chain explored in the context of Moletele restitution initiatives, Hoedspruit

Nerhene Davis



Introduction

According to the United Nations Development Programme, “inclusive business models aim to include poor people into value chains as producers, employees or consumers, in ways that are both equitable and sustainable” (UNDP 2010: 3). Inclusive business models in the agricultural sector are also widely seen as a means of providing access to capital, information and markets for smallholders and communities who may otherwise be marginalised from the economic mainstream. Inclusive business arrangements, therefore, are seen by many as an effective means of rural development (Vermeulen and Cotula 2010) and also as a much more viable alternative to large-scale land acquisitions (‘land grabs’) as it is currently driven by institutional interests across the globe.

Vermeulen and Cotula’s (2010) definition of a business model is used in this paper. It refers to the way in which a company structures its resources, partnerships and customer relationships in order to create and capture value, in other words, all that enables a company to make money. In cases where joint venture arrangements are implemented in the form of business models, they are also interpreted as a form of ‘inclusive’ or ‘collaborative’ arrangements. Such models have been variously described as “inclusive business” (www.inclusivebusiness.org), “mutually beneficial partnerships” (FAO and CIFOR 2002) and “inclusive capitalism” (Hart 2007). Vermeulen and Cotula assert that “the specific terms and conditions of inclusive business model arrangements could result in better local control of business activities by community members on the one hand, but inappropriately designed, they could deliver only nominal influence for the community over key decisions and little or no dividends as profits” (Vermeulen and Cotula 2010: 6). Therefore, there is a pressing need for a better understanding of the specific agreements and design of inclusive business model arrangements.

Inclusive business models have also been introduced in the context of the South African land reform programme. The stated aim of this programme is to redistribute agricultural land among the wider population, restore ancestral lands to individuals and communities and strengthen land rights more generally. The highly developed nature of the commercial agricultural sector in South Africa provides opportunities for previously marginalised groups to engage in production of high-value commodities for domestic and international markets. It also presents

major challenges in terms of capital, skills and competitiveness (Lahiff et al 2012). The direct transfer of viable agricultural land back to restitution communities over the last decade has resulted in what some commentators have branded as “spectacular failures”, as a result of an alarming decrease in productivity on newly restituted farms. It is in this context that a variety of “strategic partnerships” – a hybrid form of an inclusive business model – have emerged in South Africa. Partnerships are established between (largely poor) black landowning communities and (mostly white) partners from the commercial sector.

These initiatives take the form of joint ventures where ownership of the land is transferred to the claimant community, but they are not allowed to move back onto the land. Instead, claimant communities enter into agreements with agribusiness partners who commit themselves to manage the land on behalf of the claimant community with the contractual understanding that benefits are shared between the partners (Department of Land Affairs (DLA) 2008). This approach has been particularly prominent in Limpopo where large areas of high-value agricultural land and infrastructure are being transferred to community groups. In theory, the model should respond to a demand from claimant communities for technical and financial assistance in managing large agricultural enterprises. For private sector partners, some of them former owners of the land in question, it might present an opportunity to preserve or even expand commercial activities within the agri-food sector, albeit under new conditions (Lahiff 2007; Lahiff et al 2012).

Others contend that strategic partnerships negotiated in terms of the restitution programme can create opportunities for existing actors in the commercial agro-food sector to gain access to valuable land and water resources, better control of upstream and downstream processes and to lucrative government grants (Derman et al 2007). In instances where these types of partnership arrangements have been negotiated, as in the cases of Zebedele, Levubu and Moletele strategic partnerships, production on the land has continued. What is less apparent is the extent to which *real* benefits are being transferred to the nominal owners of the land - the restitution communities. Thus, in addition to the need for assessing aspects pertaining to the ‘inclusiveness’ of these business models in terms of ownership, risk sharing, voice and reward as suggested by Vermeulen and Cotula (2010), we also need to understand the role and involvement of newly restituted communities in the commodity chains from which

they are now assumed to be benefiting. In this regard, the specific agricultural commodity being transacted and the need to understand key aspects in the field of high value agricultural production are important.

Observations that some strategic partners are only becoming involved in these partnerships to improve their control of upstream and downstream activities in the value chain invoke the need to interrogate the governance structures (nature of power relations) and the range of benefits and risks being introduced to restitution communities. Recent studies (Kaplinsky 2000; Vagneron et al 2009; Bolwig et al 2010) increasingly caution against the uncritical insertion of rural producers into existing global value chains in terms of 'poverty reduction' goals. In this regard, Bolwig et al (2010) contend that even if rural producers, workers and migrant workers are included in global value chains, this may not be on advantageous terms, and a careful analysis should be made of the costs and benefits of participation in a particular chain. In support of this notion, du Toit asserts that "poverty can flow not only from exclusion but also from processes of integration into broader economic and social networks". In this instance, he argues that these tendencies are better captured as "adverse incorporation" into these value chains (du Toit 2004). The aim of this paper is not to make a judgement of the benefits or otherwise of the inclusion of restitution communities into global value chains in terms of these partnership agreements. Instead, it sets out to understand the structure, agreements and outcomes in the broader context of the 'costs and benefits' for these communities in relation to their incorporation into the value chain.

This paper, therefore, attempts a better understanding of strategic partnership initiatives in the context of agricultural commodity chains. A case study approach is adopted to explore aspects of the citrus value chain from the perspective of inclusive business model arrangements introduced as part of the Moletele restitution initiatives in the Hoedspruit area, south-eastern Limpopo.

This paper is based on ongoing research in the Limpopo Province and includes a detailed case study of the Moletele strategic partnership initiative in South Africa. Research methods include field observations since 2009, analysis of the Moletele Communal Property Association's (CPA) financial statements and contractual agreements, and interviews with a wide range of key informants, community members, commercial partners and state officials.

Although the central theme of the inquiry is about inclusive business models involving partnerships between highly unequal partners, it also concerns the power relations between those in the value chain. The links between the different agents and their functions in commodity production in its different stages are as important as the social relations between the agents and the institutions which characterise unequal power.

The paper begins by briefly sketching the Moletele restitution case and the joint venture initiatives that were introduced to enable the transfer of land to the Moletele CPA. This section is followed by a short overview of how these initiatives have evolved over the last few years. The paper concludes with some of the key findings of a descriptive value chain analysis of citrus production activities on Moletele land.

The Moletele restitution case

In 1991, the de Klerk government repealed the Land Acts of 1913 and 1936 and appointed an Advisory Committee on Land Allocation (ACLA) to make recommendations on the disposal of state land, including restoration to dispossessed landowners. The Moletele community, which had been trying to get back their land since 1985, lodged a claim with ACLA in 1992. The total land under claim covers approximately 78 000ha of land in the Hoedspruit area. The Commission on Restitution of Land Rights accepted the validity of part of the claim in 2004, and in 2007 a total of 7 652ha of prime agricultural land was restored to 1 615 households under the Moletele CPA. The total cost of land acquisition thus far is estimated at R194 million.

The initial expectations on the part of the state were articulated by the then Minister for Agriculture and Land Affairs, Ms Lulama Xingwana, at the land handover ceremony to the Moletele community. The Minister, framed a vision for the Moletele people asserting:

This land that we are restoring today has some of the best oranges and mangos this country has ever produced. As from today the people of Moletele are now exporters. You are going to be operating from the well-equipped pack-house that we have included in the purchase of this land". ... This deal will also accelerate value-adding in the produce coming from

this land of milk and honey. This will ensure participation of the Moletele Community in the entire value-chain. These partnerships give credence to economic empowerment because the community will not only receive hand-outs in the form of lease rentals but will be participating in the day-to-day management of the farms.

Subsequent to land restoration, the Limpopo Regional Land Claims Commission together with the Limpopo Department of Agriculture and Maruleng Local Municipality assisted the community to enter into joint ventures with three different strategic partners forming the following companies: New Dawn Farming Enterprise (Pty) Ltd, Dinaledi Farming Enterprise (Pty) Ltd and Batau Farming Enterprise (Pty) Ltd. The Moletele also leased out some of their farms to commercial farming companies, e.g. Richmond Estate.

Overview of partnership initiatives on Moletele land

When the Moletele restitution case was settled, negotiations were driven by the notion that the productivity on the farms should continue and that strategic partnership arrangements should be the type of joint venture arrangement to achieve the desired outcomes and inject the community into the arena of global agricultural production. Since inception, however, the benefits initially envisaged have not materialised. Some of the strategic

partners withdrew and some even filed for liquidation. In this regard, both the strategic partners and representatives from the Moletele CPA blame an over-reliance on the payment of the promised state grants for some of the challenges they are currently experiencing. A recurring discontent, therefore, is being expressed by key actors involved in the Moletele claim regarding the design of the strategic partnership (SP) model. These actors observed that the model was too complicated and that it opened up the community to unnecessary risk. This risk became apparent after government failed to transfer promised grants. These could have been used to pay off the loan account of the partnership as the 'community's contribution'. The community in some instances now seemingly 'owes the strategic partner' in terms of partnership contributions. The liquidation of bankrupt strategic partners also resulted in risk for the community with some of the Moletele's movable property possibly being attached to liquidation notices.

These challenges prompted the Moletele CPA committee to shift towards the establishment of 'community-private partnerships' (CPP) – effectively rental agreements, with some added benefits for communities. In terms of the CPP agreement, setting up a joint venture company with investment from the community is not required. All commercial operations remain in the control of the partners, including access to finance and production risk. Large commercial partners appear to be the desired business partners as they would be able and more likely to undertake the required investment and risk envisaged in the CPP arrangements. The chairperson of the CPA observed that the CPP arrangements might be less ambitious but with more secure benefits for the Moletele community in

Table 1: Summary of Moletele partnerships

Joint venture company	Total ha managed	Current ha under production	Production	Employment
New Dawn Farming Enterprise	1019 ha	405 ha	Citrus, mango, guava, and paw-paw	123 permanent and 390 seasonal
Dinaledi Farming Enterprise	686 ha	355 ha	Lemons, grapefruit, and Valencia oranges	650 permanent and seasonal
Batau Farming Enterprise	855 ha	157 ha	Mango, citrus, litchi, and vegetables	72 permanent
Richmond Estate	2434 ha	590 ha	Grapefruit, Valencia oranges and mango	135 permanent and 440 seasonal

the form of timeous lease payments, employment and investment in farming production with lower risk for the community.

In the case of the Dinaledi partnership, ideas are currently being explored to move away from the SP model towards a CPP between the CPA and the same strategic partner. The CPP agreement compels the business partners to invest in training and preferential employment of Moletele community members, and to invest in maintaining the quality of existing orchards, the planting of new orchards and the upkeep of the packhouses on the land on behalf of the community. As the CPP model requires significant investment on the part of the new business investor, a shift in this direction may indicate a trend towards favouring 'bigger commercial partners' able to shoulder this level of investment. Key informants stated that the Boyes Group would favour the shift towards the CPP model because the complex arrangements regarding decision making and daily management activities on the farms would become somewhat less cumbersome, and they can make the kind of capital investment required in terms of the CPP model.

At Batau, the CPA decided to introduce a CPP agreement with Bonosafe (the management and empowerment company owned by South African Fruit Export (SAFE), which has a number of joint ventures with communities in South Africa and Zimbabwe). The Bonosafe agreement would involve a CPP agreement between the Moletele CPA and Bono Holdings, which forms part of SAFE, an established company and trademark. According to its website¹¹, SAFE is one of the fastest growing independent exporting companies in the world, and it has been able to position itself as a key role player in the Southern African fruit exporting industry. All logistical operations and commercial and production activities are coordinated from SAFE Farm Ventures in Cape Town, established in 2009. In 2008, Bono Holdings was established as a joint venture company between SAFE Mauritius (its head office) and Evans Malokisa Nevondo. Bono Holdings is a management company responsible for the operational performance and financial health of the empowered entities. It provides running capital, farming implements, skills transfer (training workers) and health care. Farms are operated in conjunction with the trusts and beneficiaries.

The CPP agreement has not yet been finalised and currently a management contract with Bono Holdings is in place. The management contract, informally referred to

as a "caretaking agreement" by CPA committee members, takes the form of a lease agreement where the leaseholder (Bono Holdings) pays a lease amount and takes over the management of the land on behalf of the owner (Moletele CPA). To provide incentives for the farm management, the contract makes provision for profit-sharing rather than a fixed fee.

Value chain considerations in the context of partnership agreements

Overview of the South African citrus industry

During the 2008/09 production season, the citrus industry contributed R6 billion to the total gross value of South African agricultural production (Citrus Growers Association (CGA) (2010)). South Africa's citrus industry, unlike much of the country's manufacturing and processing sectors, has always been outwardly focused and 'globally integrated'. The industry is an important foreign exchange earner and currently is the twelfth-largest producer and third-largest exporter of citrus globally. Some 45% of citrus is exported to Europe, with the UK as the top destination (CGA 2010). Exports of citrus to the UK started in the first decades of the last century, and by the 1960s South Africa was exporting well over half of all southern hemisphere's fresh citrus and was ranked among the top five fresh citrus exporters in the world. By the mid-1990s, the 40 million cartons of citrus exported to over 60 countries represented one third of the total local and export value of South African fresh fruit production (Mather 2005; Mather 2008). Quality differentiation sets the South African citrus industry apart from other citrus producing regions in the world, and buyer confidence seems to be a key driver of success in not only maintaining existing markets but also in terms of breaking into new markets.

Since market liberalisation and a move away from single channel marketing boards, the success in the citrus value chain is predicated on the ability to meet fairly stringent requirements in a vigorous self-regulated industry with strong producer representation, research, extension and market access service (Mather and Greenberg 2003). While deregulation delivered a new-found freedom to exporters and producers, this new era of independence

Table 2: Overview of Moletele partnership initiatives, 2008-2012

<p>New Dawn</p> <ul style="list-style-type: none"> Partnership between Strategic Farm Management (SAFM) and Moletele CPA, formed in 2008 CPA owns 52% of the shares and SAFM owns 48% Set up for period of 15 years 1,019ha of land, with 405ha under irrigation for mangoes, citrus and litchis 326ha used for grazing 79ha leased Currently rent only paid very sporadically Development grants from the state not paid and are reflected against the loan account. 	<p>Still a strategic partnership arrangement and strategic partner has opted to apply for a loan from the DBSA to stay in business.</p>
<p>Dinaledi</p> <ul style="list-style-type: none"> Formed in 2008 <p>This is a partnership between the Moletele CPA and the Boyes Group (which exports oranges to Canada, EU, Russia, Middle East, Japan and Mauritius and employs around 270 permanent and 450 seasonal workers)</p> <ul style="list-style-type: none"> Comprises 686ha of land under citrus production: <ul style="list-style-type: none"> based on 50:50 share in the operating company seen to date as the “relative success story” at Moletele been able to invest own money in skills development towards the community development grants from the state not paid to date resulting in unwillingness from the current strategic partner to continue to invest more money. 	<p>Still a strategic partnership arrangement but the possibility of a CPP arrangement is being investigated.</p>
<p>Batau</p> <ul style="list-style-type: none"> Partnership very similar to New Dawn contractual agreement also formed in 2008 52% CPA and 48% strategic partners (comprising four of the previous commercial farm owners who have structured themselves into a company called Chestnet Holdings) Comprises 855ha of land under citrus, litchis, vegetables and mangoes Since inception plagued by challenges Could not source additional finance and development grants were never paid – partnership collapsed end of 2009. 	<p>CPP agreement with some challenges. Bono Holdings has been farming and exporting on community land for 2 years now, but the signing of the CPP lease agreement is consistently being postponed.</p>
<p>Richmond</p> <ul style="list-style-type: none"> Comprises 2 434ha of land transferred at a cost of R63 million (US\$9m) Single portion of already well-equipped land with almost 600 ha under established citrus production CPP agreement with Golden Citrus Frontier (now Bosveld Citrus – one of the major players in the citrus industry). 	<p>CPP agreement in place and lease payments being made into the account of the CPA as the representative body of the Moletele community.</p>

also brought a unique set of challenges and imperatives. The increase in competitors led to the need to strengthen competitive advantage for the business to succeed. The volume of citrus supplied to the market began to increase and quality and price became important tools of diversification (Mather 2008). In an interview with one of the members of the Citrus Growers Association¹² in Hoedspruit, the abilities needed to be a successful citrus exporter were listed as “a sound knowledge of exchange rates, the ability to meet buyer-driven requirements and a general sense to ‘read’ the market (timing and planning in terms of market demands and shifts).” These observations are informed by the evolution of the citrus fruit sector in the highly competitive global markets with the rise of increasingly powerful global retail chains in fruit distribution. As a result, Fundira (2003) asserts that citrus is evolving from a producer-driven to a buyer-driven chain.

Input –supply considerations

The Moletele land was transferred back to the community as the portions became available. These portions were consolidated into four different entities/operational farming units:

- i. consolidation of land into newly defined operational units required new inputs;
- ii. more cost-effective irrigation systems had to be installed on some of the newly acquired land consolidated into continuous farming units;
- iii. in some instances older, less resilient cultivars had to be replaced with newer alternatives to make these new units more economically viable; and
- iv. a shift towards star ruby grapefruits for export, particularly to Japan, in the face of changing consumer demand.

While the partnership deals and land transfer were being negotiated some of the farms deteriorated and orchards became overgrown. A great deal of money had to be invested to clear newly acquired land and prepare it for new tree planting. Land preparation and proper drainage requires sound planning, considerable investment and clearly defined implementation strategies. Cost of land preparation and irrigation is estimated at approximately R50 000/ha.

In the Hoedspruit and Letsitele area, citrus producers have two options. They can either buy nursery trees that are already certified and registered from one of the only two CGA-approved nurseries in the area or they can buy seedlings/bud wood, for which they have acquired their own certification, to be grown into seedlings. Timing and planning for ordering the new seedlings appears to be fairly critical as an eighteen-month waiting period is required to obtain seedlings.

The New Dawn strategic partner, SAFM, was proactive in this regard and started a nursery on one of the Moletele properties where they are currently growing their own seedlings – now targeted for new orchards on Moletele land. At present, the nursery is growing approximately 25 000 new seedlings that will be planted on newly cleared Moletele land once a Development Bank of South Africa (DBSA) loan for the partnership is transferred. The benefit of this approach is that the eighteen-month waiting period and the cost of sourcing the seedlings from a designated service provider would be nullified. The nursery is turning into a very attractive endeavour, with other farmers from the surrounding area now also approaching the CPA and the strategic partner to explore the possibility of nursery-grown seedlings for the surrounding farms. This proactive approach to market demands by the New Dawn strategic partner illustrates Greenberg’s (2010:17) assertion that “the role of individual actors as active agents, who shape their own reality ... and thus alter or reinforce the function and structure of existing value chains...” should not be downplayed as is often the case in a value chain approach focusing only on the structural functioning of a commodity chain. Initiating the nursery on Moletele land and allowing the community to manage and benefit (from sales of seedlings to the surrounding farmers) thus would allow the community to become involved and benefit from upstream activities in the citrus value chain. This approach could contribute to a previously under-explored benefit stream in terms of the partnership agreement and allow the community more strategic positioning in terms of citrus value chains in Hoedspruit.

The farms were transferred to the Moletele CPA as going concerns. Existing employees were retained, leaving limited scope for new employment opportunities of community members. Less than 5% of the workforce at the time of transfer was from the Moletele community. Agreement was reached between the CPA and the strategic partners in the CPP contracts that Moletele CPA members would be given preference for any new employment. However, challenges surfaced. The majority of Moletele community

members live about 45km outside Hoedspruit (where the farms are located). This means the limited transport options and escalating transport costs hinder community members from taking up available positions on the farms. Strategic partners and CPA members observed that community members preferred working in the packhouses and were generally reluctant to do work on the land.

In terms of the partnership agreement, skills transfer and employment was clearly earmarked as one of the benefit streams towards the community, but in reality this has not materialised. The labour issue is also much more complicated than initially envisaged. In an effort to cut costs and comply with labour legislation, citrus growers in Hoedspruit have responded to shifts in the agricultural labour market by substituting permanent labour with temporary and casual labour and have increased their use of labour contracting. Therefore, apart from context-specific hindrances to maximise employment benefits to the community, Hoedspruit's citrus farmers' response to the broader trends in the agricultural industry has resulted in fewer employment opportunities for the community.

Production

Profitable citrus production only begins in the eighth year after planting. From the third year some yields are available but mostly for juice production. This long waiting period must be taken into account for planning and projections, especially where new orchards have been planted. The waiting period must be communicated and anticipated in terms of projected benefits and profits.

Furthermore, use of additional fertilisers, pest control, irrigation practices and even the working conditions of farm labourers need to comply with a variety of accreditation requirements, e.g. Fair Trade, Field to Fork, and Perishable Products Export Control Board (PPECB) accreditation.

Despite these challenges, the scale of production at New Dawn, Richmond and Dinaledi farms allowed for economies of scale which enabled cartons of citrus to be delivered to the ports at less than R50/carton (translating into costs below the industry norm).

Processing

Processing involves harvesting, washing, sorting and waxing the produce in accordance with stipulated and agreed requirements/procedures. Representatives from

various government organisations, lead firms and other regulating authorities visit the community-owned packhouses to ensure compliance with a range of export standards, regulations and accreditation specifications. In previous years, inspections were conducted at the ports before shipment, but now representatives from all these regulating bodies come to the packhouses.

In terms of a very crude and simplified input-output approach, the CGA representative in Hoedspruit provided the following calculations:

- It is estimated that the value of a carton of citrus (oranges) from the land (just after harvesting) is around R18/carton. (This estimation is what the carton can be sold for at this stage in the value chain).
- Once the produce has been washed, sorted, waxed and packed, the value of the same carton of oranges increases to approximately R25/carton.
- After packing, the carton is transported to the port, and its value increases to approximately R33/carton.
- Supply and distribution costs (cold storage and transport) at R10/carton increase this figure to R43.
- Price on the ship or Free on Board (FOB) i.e. cost to port before shipping at R10/carton increases the figure to R53.
- Delivery in port (DIP) costs include shipping to destination. This translates into an estimated R10/carton freight cost, bringing this to R63/carton.

Once cartons reach the export agents at the ports all actors in this value chain stop using calculations in terms of ZAR per carton. Given that commodities at the ports are sold in US\$ and Euros and given that export agents are allowed a 180-day waiting period to 'read' exchange rate trends, it is evident that most value is not captured at the production or even processing stages of the citrus value chains (where there is still a semblance of community involvement). In terms of the crude calculation above, profits and cost incurred by logistics companies, importers and marketing agents in the importing country, further processors, retailers or other market channels and the state (in the form of tariffs, levies and taxes) will also need to be accounted for – or it may seem as if

exporters capture the greatest share of the value, when they may not. But the calculations demonstrate that the profit/benefit accrued by the exporting company still outweighs what the community gains from the mere production of the commodity on their land.

On Moletele land, depending on the quality of the produce, 20–30% of the citrus is channelled towards juice production. As juicing is outsourced, there is very little community involvement or benefit from this processing. Richmond and Bono Holdings (CPP model) used their own subsidiary companies to do the juicing, while the strategic partners sub-contracted juicing to independent companies.

Export

Initially the idea was that the Moletele community would become part of the value chain as exporters. This was not the case in practice. In fact, some commentators caution against the idea of communities becoming exporters in global agro-commodity chains, claiming that it might open up impoverished rural communities to unnecessary risk. Perhaps there is a middle ground or workable compromise to be reached in this instance.

Consider the following: the New Dawn strategic partner (SAFM) was once again fairly innovative. The owner made an offer to the community to purchase 10% of the shares in his export company. This seems quite feasible as 10% of the shares would provide the community with at least some income from export activities without opening them up to major risk. It would also open up opportunities for mentorship. Industry specialists tend to agree that the lion's share of the profit is not in production or processing of agricultural commodities, but in the export of these commodities. Perhaps allowing communities partial involvement in export activities might be considered a more feasible option than simply stopping all community involvement at production and processing stages in the value chain.

Conclusion

Pritchard (2000) observes that a traditional political economy approach to the agrifood chain sees capital accumulated through controlling the tangible means of agricultural production: land, labour, nutrients and chemicals, water, genetics and seeds, feed, equipment, and capital. He continues that it is equally important to

recognise that ownership and control of intangible assets (information, brands and patents), rather than control of the tangible means of production, can allow the concentration of capital from a supply chain as well as the conversion of that capital into mobile financial capital. He concludes that “the governance of supply chains hinges on controlling the means of co-ordination rather than the means of production.” In the case of citrus production activities on Moletele land, it seems as if control and ownership of the tangible “means of production” are not delivering many benefits to the restitution members. The strategic partners and community-private partners are in a better position to capture value in existing chains because they have a better understanding, know-how and control, not only of upstream and downstream activities but also of intangible assets.

New Dawn and Dinaledi did show attempts at better horizontal integration/community involvement along the value chain. New Dawn set up the nursery on Moletele land, explored the feasibility of supplying seedlings for Moletele land and to neighbouring farmers, and gave the community the option to purchase 10% of shares in the export company. Dinaledi invested significantly in skills development programmes and Fair Trade accreditation which indicates they have tried to ensure adherence to basic conditions and minimum wage legislation for farm workers. Five years after the transfer of land commercial production on the land is continuing: a functioning management structure in the form of a business-orientated CPA remains in place and it has an impressive bank balance. The way forward for the Moletele community seems a bit more precarious. Production on the land might have continued but disillusioned community members increasingly ask for more benefits to be channelled their way.

It is generally observed that the direct introduction of rural producers into global value chains has delivered mixed results and a significant proportion of the literature focuses on the challenges and complexities of introducing rural producers into these value chains. Similarly, it can also be concluded that the more indirect ‘inclusion’ of a restitution community into the global value chain via inclusive business model arrangements, particularly in the case of the Moletele community, seems to have resulted in what can also be labelled as ‘ambiguous outcomes’. In conclusion, the quiet discontent observed during fieldwork conducted in 2010 is also currently surfacing into an open challenge from community members asking “in whose interest is production on the land?” The CPA seems to be committed to ensure continued production

on the land, but until they come up with viable strategies of distributing benefits from the production and other value chain related activities to the communities, their efforts appear to be promoting corporate rather than community interests.

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Smallholders and the 'Walmart effect' in South Africa

Stephen Greenberg¹³ and Gaynor Paradza



Introduction

In 2010, Walmart put in a bid for the acquisition of 51% of Massmart, a South African food wholesaling and retailing company. Massmart closely resembles Walmart's model of 'big box' stores, where goods are sold in bulk at discounted prices. In March 2012, following lengthy procedures, the Competition Appeals Court approved the merger with some conditions, including the establishment of a R100 million supplier fund, proposed by the merging companies, to assist local suppliers and distributors to meet the conditions for entry into Walmart-Massmart.

The entry of Walmart, the world's largest company and retailer, into South Africa potentially opens a new chapter in food retailing in southern Africa and Africa. This paper takes its title from a book by Charles Fishman (2007) that essentially points to a trade-off between price and quality on the one hand, and volume and apparent stability on the other. In other countries, including the US, suppliers have decided to enter into supplier relationships with Walmart because of the massive boost to volume it provides, and hence to quick growth in the size of supplier companies. However, Fishman shows that over time these suppliers become dependent on Walmart as the main buyer and are compelled to compress their costs

as the retailer demands annual price cuts. The suppliers' businesses are geared towards supplying Walmart and it becomes difficult for them to extricate themselves from this relationship. Over time, this results in suppliers cutting corners on the quality of products, resulting in the general trend we see today of poorer quality products on the shelves, using poorer quality methods, without a better alternative on offer even at a higher price.

Walmart aims to sell products more cheaply than its competitors. This means some of the savings in the supply chain are passed on to consumers. In the context of a large base of consumers who live in poverty this poses a dilemma for policy makers and regulators. Do you choose to reduce consumer prices at all costs, or do you consider the longer term implications of a decline in quality (for food this is especially important) and a gradual erosion of the production base as jobs are exported to cheaper places in order to meet Walmart's conditions? South Africa's competition authorities have explicitly endorsed the former. The Competition Tribunal argued that "since the evidence is that the likely consumers, who will benefit most from the lower prices associated with the merger, are low income consumers and those consumers without any means of support of their own, thus the poorest of South Africans, the public interest in lower prices is no less compelling [*than the effect of the merger on local producers and jobs*]" (Competition Appeal Court 2012: 16). The Appeal Court ruled in favour of the merger and hence in favour of low consumer prices in the short-term over long-term production capacity.

Walmart will target lower income groups and thus build supermarkets in townships and rural areas. This is its primary market in South Africa, as elsewhere. It is in line with government's Comprehensive Rural Development Programme, which identifies rural shopping malls as an area for development, under economic infrastructure (DRDLR 2009: 2).

It is questionable whether prices will decrease all that much in any case, given the rapid rise in food prices in South Africa and globally over the past few years. These price rises are structural and are unlikely to decline in future, since the basic cost structure of producing food has increased. Concentration in food retail is not disconnected from these price rises. This is a story that will unfold over time, and it will need to be tracked in South Africa.

This paper looks in more detail at the way Walmart's supplier relations work and it attempts to situate this in

the context of existing corporate retail practices in South Africa. It then seeks to consider the possible implications of these dynamic processes on the possibility for small-holder farmers to improve their livelihoods by entering into supplier relations with corporate food retailers.

Fresh produce value chains exhibit buyer-driven relationships in a fairly hierarchical structure of power from retailers down. There may be variations in the relations between one node and another in different chains (e.g. suppliers of high quality branded products may have more leeway for negotiation than suppliers of undifferentiated commodities). Although the ultimate buyer is the consumer, it is a myth that consumers significantly shape retailers' decisions about branding and defining markets. More realistically, consumer preferences are shaped by retailer strategies in differentiating markets and products, and defining need through advertising and sales strategies.

Although the consumer converts the product into a use-value or throws it away once it is bought, what happens to the product does not matter from the perspective of exchange value which underpins capital accumulation and growth. The commodity disintegrates into capital growth once its final exchange value has been realised by the retailer (or on some occasions, by those who add further value after wholesaling or retailing, such as prepared food, which then funds a further cycle of accumulation).

Much has been written on the relationships between smallholder farmers and food retailers. Some have critiqued contract farming for the imbalances of power it reproduces (e.g. Little and Watts 1994). Others have identified where the power imbalances lie (e.g. Dolan and Humphrey 2000; Gibbon and Ponte 2005; Seville et al 2011). The technocratic response to this has focused efforts on rectifying these power imbalances without destabilising the overall functioning of value chains as circuits of accumulation (e.g. Jaffee et al 2003; Reardon, 2005). The roots of fair trade, private codes of conduct and similar initiatives are found here (e.g. Barrientos et al 2003).

The South African food retail sector

There is a long history of corporate/co-operative domination of the agro-food system in South Africa, from seed companies, through grain storage, processors and manufacturers to food retailers. Under the apartheid control schemes, co-operatives were appointed as monopoly agents for the receipt of the crop, payment to farmers, storage and onward consignment to processors. Bayley (2000) referred to “an agricultural *nomenclatura*” – a privileged caste of intellectuals in the state bureaucracy and companies/co-operatives that dictated state policy. Amendments to the Co-operatives Act in 1993 allowed the co-ops to convert into companies, effectively privatising decades of state investment. It also allowed them to diversify services, including into retailing of farming requisites and financial services. This enabled them to retain their economic power, even while they experienced a period of disconnection or distance from the state bureaucracy.

In the era of state-controlled prices not all food value chains were buyer driven. Deregulation eliminated single-channel markets and price controls, opening the door for retailers to increase their power. “The demise of marketing boards meant that the farmers’ collective bargaining powers were drastically reduced” (National Agricultural Marketing Council (NAMC) 2009: 1). This led to increased competition among suppliers and trade liberalisation extended competition to international sources too. The result was a sharp rise in the global sourcing of food products, especially processed products. Overall, the value of imported processed food products rose more than 6.5 times between 1995 and 2007, from R3 billion to R18 billion. Unprocessed food products also rose, though not as sharply, from R5 billion in 1995 to R12 billion in 2007 (National Department of Agriculture 2009: 84).

The formal supermarket sector is dominated by four big corporations: Shoprite, Pick n Pay, Spar and Woolworths. They have more than 94% of supermarket sales, and an estimated 55–68% combined share of the food market (Weatherspoon and Reardon 2003: 1, for the lower estimate; Planting 2010 for the higher estimate). Shoprite and Pick n Pay are the biggest, with a combined 64% between them. The South African supermarket sector has been characterised as an “extremely tight oligopoly”

(Naidoo 2011). Each corporate chain has different store brands which target different living-standard measurement (LSM) categories.

According to documents submitted to the Competition Commission, Massmart only had a 2% share of the formal food retail market in 2009, although it was the second largest company (behind Metcash) in food wholesaling, with a 22.4% share of food wholesaling in 2009 (RBB Economics 2011). Massmart has a wholesale division called Masscash, which includes CBW Holdings and Shield in the food sector. Shield serves 633 independent retailers and wholesalers in South and southern Africa¹⁴.

Agro-food system dynamics are very different in South Africa and between different countries and regions in the rest of the continent. In South Africa, agricultural production is concentrated among a small core of highly capitalised large producers, and this concentration is replicated at each node in agro-food chains, including food retailing. In contrast, agricultural production on the rest of the continent is characterised by many small farmers, with dispersed food distribution and retail systems. There is some concentration but not to the extent of South Africa.

According to Coriolis (2001: 55) only 20% of food retail in southern Africa was through supermarkets in 2000. Most food sales went through local market and home production, small grocers and convenience stores, and ‘cash and carry’. Kenya has a concentrating indigenous supermarket sector, with about 20% owned by large chains. This is still small compared to South Africa, but big in comparison with its neighbours. There has been little ongoing research quantifying the extent of retail expansion into Africa since Weatherspoon and Reardon’s (2003) landmark overview. All the big South African retailers have expanded into Africa in the past decade or so. In 2007, 15% of stores owned by the big four South African supermarkets in the region were outside South Africa (Emongor and Kirsten 2009: 2). In 2011, Massmart was operating in thirteen countries in sub-Saharan Africa through four divisions (Masdiscounters, Masswarehouse, Massbuild, Masscash) comprising 235 stores in Botswana, Ghana, Lesotho, Mozambique, Namibia, Nigeria, Swaziland, Tanzania, Uganda and Zambia. Shield wholesalers’ outlets are also found outside South Africa (Fastmoving 2011). Expansion into Africa is mainly driven by relative saturation in the South African market and intense competition, combined with higher potential margins in Africa (Reardon 2005: 6).

The procurement and distribution of fresh fruit and vegetables

Fresh produce tends to lag overall food retail concentration, mainly because of local consumption 'habits', and that freshness, convenience (closer to residential areas) and lower cost of produce at smaller shops and fresh produce markets outweigh the advantages of supermarkets until the latter are able to realise economies of scale (Reardon 2005: 4).

Historically, the marketing of most fresh fruit and vegetables (FFV) was not regulated in South Africa. Control boards for citrus, deciduous fruit, potatoes and bananas were established from the 1930s to the 1950s. Citrus, deciduous fruit and bananas were controlled through one-channel pool schemes, while potatoes had a floor price scheme (Bayley 2000: 19). The schemes essentially limited distribution outlets in the hope of achieving price stability and increasing efficiency (NAMC 1999: 20). These schemes were abolished before or at the time of the 1996 Agricultural Marketing Act. For the remainder of fresh produce fourteen national fresh produce markets (NFPMs) were established in the late 1960s under the control of local municipalities. Agents acting on behalf of producers negotiated privately with buyers, including wholesalers, retailers, hawkers, consumers, processors and institutional buyers (NAMC 1999: 22). This system still works more or less in the same way, with registered agents acting on behalf of producers. The extent of control of producers over agents is directly proportional to economic size, although agents do bring specialised knowledge about the marketing of fresh produce.

A distinction should be made between procurement and distribution. The former is about finding the product, and the latter is about bringing the product to the store. Nevertheless, these often go hand in hand, with wholesalers performing both functions.

There are a number of channels through which supermarkets procure fresh produce. They can either go directly to the farmer, or source through an intermediary. Intermediaries can either be independent agents, who source produce and then approach the supermarkets to establish a supply relationship, or the NFPMs, where retailers or their agents may come to the markets to purchase their requirements.

The fresh produce markets still exert an influence, even though they have lost power since deregulation in the mid 1990s. In 1998, the NFPMs accounted for around 55% of total fresh vegetable production (NAMC 1999: 26). According to the NAMC (2007: 16), the share of production traded through the NFPMs of potatoes, tomatoes, cabbage, onions, pumpkin and carrots¹⁵ dropped from 63% to 52% between 1993 and 2004. This has gone hand in hand with retailers sourcing a greater proportion of their produce directly from farmers. In 1998, direct sales to trade (including hawkers) constituted 8% of total production (NAMC 1999: 26). Although the major food retailers continue to source a portion of their fresh produce from the FPMs, this was as little as 10% of total procurement by 2007 (Bienabe and Vermeulen 2007: 3). Nevertheless, the larger fresh produce markets in Johannesburg, Cape Town, Tshwane and Durban remain price formers for many horticultural products.

Retailers will closely monitor procurement, increasingly through category managers or agents contracted by the supermarket. Category management¹⁶ refers to combining similar products (e.g. fresh produce or even a line of fresh produce) into a distinct category ("a group of mutually substitutable items") on their own, which is then managed as a separate business within the larger retail business. It is associated with the development of a more collaborative relationship between retailer and supplier, with retailers drawing on suppliers for business ideas to grow the category as a whole (rather than just individual products). Data analysis and the ability to turn the information into actionable strategies are at the core of category management. Two developments were required to make this a reality: the concentration of retailing and information technology.

Shoprite has its own category manager for fresh produce, called Freshmark, dedicated to the procurement of fruit and vegetables for Shoprite. Freshmark receives produce from suppliers and then repackages for distribution to Shoprite stores (Louw et al 2008: 5).

There is a shift away from an old procurement model based on sourcing from traditional wholesalers and wholesale markets towards a new system with five key features:

- i. centralisation, which strips out wholesale markets and brokers;
- ii. regional sourcing networks;

- iii. specialised wholesalers (category managers);
- iv. moving away from spot markets and towards preferred supplier systems; and
- v. a shift towards higher quality and private safety standards (Louw et al 2008: 9).

Specialised wholesalers may either continue sourcing from spot markets (the FPMs) or may enter into preferred supplier agreements directly with farmers.

According to a US supply chain analyst, “without doubt, the dominant trend in retail distribution [in the US] in recent decades has been the dramatic increase in the retailers’ control of the supply chain” (Wulfraat 2011). Looking at distribution, he argues that direct store delivery (DSD) previously was very important especially for fast moving consumer goods, including fresh produce. In DSD, suppliers bring the produce to the retail outlet and may even pack the shelves and do merchandising within their category. This can benefit the supermarkets because a bigger proportion of inventory carrying costs are held by suppliers. This ‘just in time’ and ‘lean inventory’ strategy reduces logistics costs because retailers hold the product for a shorter time before it gets to the shelf (Wulfraat 2011). This may go hand in hand with contractual terms that make the product the property of the supplier until it is sold (‘buying on spec’), with unsold products going back to the supplier. For fresh produce, whoever owns unsold produce at the time it rots or otherwise expires (i.e. its use value expires) carries the risk. For perishables, DSD can also reduce time in the supply chain. But DSD has high transaction costs, especially with many small suppliers, like smallholder farmers, and overall is a very expensive and inefficient way to distribute many products (Wulfraat 2011).

DSD increasingly is being replaced with centralised distribution (the ‘hub-and-spoke’ system), closely linked to category management as discussed above. Products are brought to a central point or central points for later distribution to stores/retail outlets. Centralised distribution benefits from economies of scale and allows an increase in the variety on the shelves (whether for good or bad). It reduces the number of deliveries to the store. It is not just about transferring costs to suppliers, but of taking costs right out of the system. There is uneven ‘adoption’ of these new procurement systems and fresh produce tends to follow processed products. Simultaneously, these systems can be set up more quickly when done

from scratch than when existing procurement and distribution systems have to be adapted (Reardon 2005: 25).

Wholesalers both source products and bring them to centralised warehouses where retailers (who have either contracted them to do this or who are independent) then purchase from them. This can take the form of a membership scheme, like Massmart’s buyers’ clubs, or it can take the form of franchises, where the retailer is branded with the corporate name, but there is self-management within the corporate framework. Franchises like Spar also have centralised distribution systems and most of the products come from the centre, although there is some allowance for franchise owners to procure a small proportion from elsewhere.

In franchise operations, stores may have some space to buy on-the-spot if they so wish. This is very pertinent for rural areas because it suggests a slight easing of the formal contractual model followed by the supermarkets. This can work for or against the farmer. In Limpopo, there are examples of small farmers who manage to produce and sell a crop to Spar supermarkets without having a long-term supply contract – such farmers may often fill in supply gaps left by the more formal contractors (Bienabe and Vermeulen 2007). On-going research by PLAAS has shown how such farmers become vulnerable to price reduction and loss of market when, for example, there is over production of a commodity. But in general, supermarkets will prefer to enter into long-term contracts, where security of supply is guaranteed. In turn, such contracts serve as incentives for suppliers to invest in assets that are specifically tailored to the retailer’s requirements (Reardon 2005: 21).

Private labels and private standards are two other features of retailing that have grown in importance. Private labelling, or store branding, is where the supermarket packages the product with the supermarket’s brand. It may cut out intermediate packaging and complete the final packaging with the supermarket’s brand on the farm. Store brands are more important for processed goods than fresh produce because, although there is a lot of farm packaging in fresh produce, farm brand names do not stand out because there are many farms. This allows the supermarket to use its own brands on these products.

Apart from the overarching quality control issues regulated by the state, private standards driven by retailers are also increasingly important to meet perceived or

created consumer demand and to differentiate retailers from their competitors. Without going into detail in this paper, private standards impose additional requirements for traceability, uniformity of product, consistency of supply and sometimes labour and environmental considerations (e.g. minimum wages, health and safety conditions, or organic production). These require independent certification and audits, which must often be covered by suppliers (Brown and Sander 2007: 9).

Smallholder-retailer relationships

What do these shifts in procurement and distribution strategies mean for smallholder farmers? On the one hand, they signify that retailers are using their power in the chain to restructure in their own interests. On the other hand, we should recognise the symbiotic relationship between supermarkets and producers: each needs the other to realise profits. This does impose limits on the extent to which retailers can force suppliers of fresh produce, including farmers, to carry the costs of compliance.

Some of these qualities and standards make it difficult for smallholder farmers to enter into contracts with retailers or suppliers. Entry into these chains may mean investing in irrigation, greenhouses, trucks, cooling sheds and packing technologies, and farmers may also need to have capacity to sort and grade, document farming practices and meet timing and delivery deadlines (Brown and Sander 2007: 7). To enter into supermarket supply chains smallholders also need the ability to respond quickly to changes in supply and demand (Brown and Sander 2007: 6). It may be possible to latch onto one buyer, but that may shift as the markets change.

Some retailers have programmes to build relationships with farmers and to provide services (including finance and input supply) to assist them to meet new requirements. In some cases this is the only form of support farmers or suppliers may get, especially where public funding has been withdrawn (Reardon 2005: 21). But this does not mean retailers are altruistic in this relationship. They face intense competition and they may use various tactics to squeeze suppliers, some of which are evident in South Africa. Producers' bargaining power in fresh produce chains is weakened by the fact that there are many disorganised suppliers and few buyers, and that the product is perishable and therefore producers cannot

hold back produce and wait for more favourable prices. There is thus very low price elasticity (NAMC 2009: 2). The result is that farmers, who supply direct, have to take what retailers offer or face delisting (NAMC 2009: 24).

The NAMC (2009: 2) has noted that nominal food retail prices have risen faster than farm gate prices without clear explanation. In the milk value chain specifically, it indicated buyers using market power through:

- i. listing charges;
- ii. slotting allowances;
- iii. retroactive discounts on goods already sold;
- iv. buyer-forced application of most favoured buyer clauses (obligations on sellers not to sell to another retailer at lower price);
- v. unjustified high contribution to retailer promotional expenses; and
- vi. insistence on exclusive supply (NAMC 2009: 9).

The Food Price Monitoring Committee (FPMC) also found buyers using their power to impose returns of no sales and in-store breakages and losses, long periods before payment, and focusing on pricing to the exclusion of other longer term issues that build retail-supplier relations (cited in NAMC 2009: 20).

Other practices whereby retailers squeeze suppliers include confidential rebates as high as 12–15%, which makes it difficult for small suppliers to stay in business (NAMC 2009: 21). Discounting for bulk purchasing is not necessarily entirely negative for suppliers because, in exchange, suppliers may get stable access to a large buyer which reduces their risk. But if this discounting becomes so large that it eliminates the supplier's profit, it will drive the supplier out of business or otherwise force them to transfer the costs elsewhere.

Retailers may also use their power to insist that suppliers take back damaged or expired goods. For manufacturers, there is still a possibility of repackaging and selling into lower income markets (NAMC 2009:21), but for fresh produce farmers this means taking the full loss. Breakages and poor management of the cold chain are also higher when retailers do not own the stock (NAMC 2009:22), and the same is true for packing material, which is a cost

borne by suppliers. The Johannesburg Fresh Produce Market provides examples of this. Farmers from Limpopo send their produce to the market on a consignment basis. When the produce arrives at the Johannesburg Fresh Produce Market (JFPM), it is in the hands of the market agents who trade the produce on behalf of the farmers. A common sight is piles of soiled vegetables that have been discarded from the floor. The reasons include exposure to the sun, poor storage and immature harvesting. Since the JFPM accepts goods on a consignment basis, smallholder farmers bear all the losses (PLAAS Pro-Poor Value Chain Governance Project). Despite evidence of these practices in South Africa, the Competition Commission had to abandon a study into retail prices in 2009, presumably because it could not find sufficient evidence of wrongdoing. The study was never released.

Most smallholders with sustained contracts with supermarkets are out of the government's range for support. Government does run some group projects where contracts were negotiated by the Department of Agriculture and these mainly fall into the sub-contracting category. In sub-contracting schemes, which in South Africa are found in organic, fresh produce, sugar, cotton and poultry among others, inputs and necessary infrastructure are provided, outputs are purchased and the difference between the price of the product and the cost of the various expenses goes to the producer as profit. In South Africa, government-sponsored contract schemes are often channelled into processing ventures. Presumably they were selected to build the entire value chain and not only agricultural production.

The producers usually are not in control of the process but are an input into the process. Production is often capital intensive. Hickey and du Toit (2007) talk about 'adverse incorporation', where people may not be excluded from participating in the value chain but where the terms of their involvement may not be in their interests. This is often the case for contracted smallholders who do not always see profits from their labour and who are bound into relations where information is not equally accessible between parties. The contracting party (the retailer or processor) is able to determine who provides services (e.g. transportation or insurance) and this choice is not always made with the interests of the producer in mind.

Other smallholders find their own way into markets, supplying intermediaries who then supply the retailers or supplying directly to the supermarkets. We don't know much about this category, who are commercial farmers

engaged in private business, but it probably is not a very large group at the moment. And then there are other smallholders who will access other channels to sell their produce that do not go via the supermarkets. There may be unevenly distributed power, or at least points of concentrated power, in these other chains too. For example, the PLAAS research project on fisheries' value chains in Malawi and South Africa (forthcoming) has highlighted control of the beachfront where the boats land their harvest. By extension, this can mirror farmer interactions in informal trading networks. Of course, this is not to say there will be concentrated power at the first point of contact into informal or formal markets in every situation of the sale of fresh produce. Many farmers are linked into social networks and interhousehold systems of distribution.

Walmart and supplier relations

Walmart will be entering into these existing supplier-retailer relationships. Massmart is a general dealer, very much in the mould of Walmart. It has both a large wholesaling operation and operates 'big box' stores (e.g. Makro) where products are sold in bulk at low prices. Historically Massmart has concentrated on non-food items although they do have a food line. The plan is to double Massmart's share of food retail in South Africa from a stated 10% to 20% (Kew 2011).

Walmart is the largest company in the world, with an internal economy larger than that of many countries. Half of Walmart's income came from its US grocery business in 2009¹⁷. In 2001 it became the largest seller of food in the US (Imlay 2006). The average Walmart customer's income in the US is below the national average and one fifth do not have bank accounts. This signals their primary demographic of lower-income people. Walmart has a wholesaling operation called Sam's Club, which provides bulk wholesaling to club members. It is like Makro, where membership is not restricted.

Walmart currently has 8 500 stores in 15 countries under 55 names, including Walmex in Mexico, Asda in the UK and Seiyu in Japan. Walmart has wholly-owned operations in Brazil, Argentina and Canada and also operates in China, India and central America. The company failed in Germany, where it encountered a highly concentrated and competitive market using similar low price

strategies as Walmart. Its 'big-box low-price' model also did not work as well in Germany as in the US. In 2010, a quarter of its sales were from its international division, of which 43% came from Asda in the UK. It is a direct competitor of Tesco, which is rumoured to be interested in a merger or acquisition of Pick n Pay following Walmart's acquisition of Massmart (Moorad 2011a). Massmart will be Walmart's first stores in Africa. Although the company is targeting growth in food market share in South Africa, Massmart's footprint in Africa is the primary reason for the acquisition.

Some long-term local effects of Walmart's entry into an area have been noted elsewhere, including rising prices following closure of competitor stores and a net decline in retail employment, resulting in a loss of diversity in the production structure. It has been accused of predatory pricing: Walmart can afford to lower prices below cost for years because of its size but it then raises them higher after its local competition is eliminated (Patel 2007, Angotti et al 2010). A survey on the findings of 52 studies looking at Walmart in the US found that the impact of the company's entrance into an area depresses the area's wages and labour benefits, pushes out more retail jobs than it creates and results in more retail vacancies (Angotti et al 2010: 4). Its entry results in the destruction of local multiplier effects, with money siphoned out of the locality into corporate coffers without circulating.

Walmart relies on a strategy of mass distribution at low prices to stores. But how does it achieve this? According to Walmart founder, Sam Walton, "people think we got big by putting big stores in small towns. Really we got big by replacing inventory with information" (quoted in Coriolis 2001: 9). In essence, Walmart has been able to take control of the supply chain through the use of information it gets from its stores on what its customers are buying.

Walmart's rise is linked to its centralised distribution system, and the company moves 85% of the cost of goods through its own network compared with 50% for its competitors (Wulfraat 2011). It is built around information technology in the form of Retail Link, which is a database accessible to suppliers to track their real-time sales in Walmart stores. This allows the retailer effectively to integrate its logistics systems with those of its suppliers (Ferney and Sparks 2004: 5). The ability to capture 'real-time' data means less reliance on forecasts, with greater integration of processes of different actors in the supply chain, in what is known as an 'agile' supply chain. Where the lean supply chain was designed

to respond to predictable demand efficiently at lowest cost, the purpose of the agile supply chain is to respond quickly to unpredictable demand to reduce stock-outs, forced mark-downs and obsolete inventory (Ferney and Sparks 2004: 10). Category captains, who are suppliers selected to manage a category, are given access to the data for the entire category in order to ensure appropriate procurement and distribution. There are strong overlaps between category management and supply chain management, with decisions about what products to put on the shelves closely followed by decisions about how to get them there.

In 2010 Walmart announced plans to take over the transport of goods from producers in the US where the company could do this more cheaply than the supplier was charging. This is an example of 'squeezing efficiencies' out of the supply chain, whether suppliers' other overhead costs would rise as a result of Walmart taking over transport, and where other retailers would be likely to foot the bill of increased transport costs (Burritt et al 2010).

A key aspect of the negotiations about Walmart's acquisition of Massmart is the establishment of a R100 million fund to develop potential suppliers to Massmart, or help them to adapt to Walmart-Massmart's requirements. According to Grant Pattison, Massmart's CEO, the fund will focus on small-scale farmers and will be disbursed over three years. The emphasis is on loan finance and equipment, with a target of 1 500 farmers (Visser 2011a). In 2012 Massmart-Walmart announced a three-year, R15-million pilot with 30–50 smallholder farmers in Limpopo. According to Pattison, Walmart "will introduce its supply chain efficiencies into South Africa" by cutting out middlemen and contracting directly with farmers, i.e. taking over sourcing and distribution functions in the chain. This will include getting farmers to pack fresh produce on their farms into Walmart- or Massmart-specific containers (i.e. private label store branding) through the creation of Massmart's own cold chain from the farm to stores, with the possibility that costs of cold storage facilities will be shared between Massmart and producers (Visser 2011b). This eliminates the cost of repackaging from on-farm into branded retail packaging. Globally, 40% of Walmart products are already private labels.

There are likely to be opportunities for commercial smallholders to enter into the value chain being expanded by the merger, with a probable focus on those farmers who are more or less in a position to start supplying

immediately. Needless to say, the majority of smallholder farmers will be left out of the chain. As Reardon (2005: 30) notes, “it tends to be the upper tier in terms of assets who supply the supermarkets”. A fund managed by retailers serves to build up their supply chains under the guise of the ‘public interest’ in advancing smallholder production.

Walmart’s entry, therefore, will have a differential impact on smallholder farmers. We should acknowledge that Walmart will need to fight for space in the South African food retail market. Massmart is not a big player in food retailing, although it is one of the biggest companies in wholesaling and with Walmart’s muscle behind it will be able to expand. A key strategy is expansion into Africa, where Massmart already has a footprint. These markets will be much more open to Walmart’s entry, since food retail remains relatively unconcentrated in other African countries.

Some will get the opportunity to enter into Walmart’s supply chain; yet they will face intense global competition, especially given Walmart’s existing global sourcing. In the tomato sub-sector, for example, local producers are already 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). Walmart has existing sources of produce, and is liable to use these. Other retailers will respond by increasing global sourcing and by cutting out costs in the supply chain, especially around distribution and packaging. Whitey Basson, Shoprite’s CEO, has already warned that “if need be, we will close down a South African pasta manufacturer in three months if we can import their product cheaper to compete” (Moorad 2011b). At the end of October 2011, the South African government, business and labour representatives unveiled a ‘Local Procurement Accord’ establishing ‘aspirational’ targets of 75% local procurement across a range of economic sectors (Creamer 2011). But the Accord is voluntary and will not prevent an increase in global sourcing in the face of competition. Distributors are likely to get cut out of the chain completely or become reduced to a few preferred suppliers.

It is highly likely that South Africa’s well-capitalised commercial farmers will benefit the most from Walmart’s entry into South African and African food retailing, since they will have the resources to adapt to new requirements, including investment in infrastructure. A minority

of suppliers may come from black small holders who receive financial and other support from Walmart in sub-contract type arrangements, which the proposed loan fund will assist in developing. The majority of smallholders will not be able to enter into the supply chain and Walmart will essentially have the effect of forcing prices down for these farmers, even further below the cost of production than they already are. In the sense of ‘capitalist efficiency’, these farmers are unable to compete and should fall by the wayside. Yet for many reasons, including the social, economic and ecological importance of a diverse production base, local and household food security and the transformation of rural power relations, a functioning smallholder farming class is a critical feature of a sustainable agrarian structure.

Reardon (2005: 4) makes the point that it is better to emphasise the development of supply relationships with supermarkets than for exports. The former is part of the domestic market whatever the problems of corporate concentration may be. Of course, South African supermarket expansion into Africa is likely to see more exports of fresh produce into the region through supply chains from South Africa.

In Africa, Walmart will be entering into relatively dispersed markets with a higher degree of small-holder production, and is likely to source globally using its existing supply chains (maybe including from South African producers) and leave domestic smallholders out of the supply chain. This will be the case unless there is pressure, like in South Africa, to source locally, whether this pressure emanates from the state or smallholders themselves. There is some sporadic evidence of this taking place, for example with Zambian smallholders on the entry of Shoprite (Miller 2008). Once the South African centralised distribution and procurement systems are fully in place, it is possible that Walmart will extend these into regional distribution centres (Reardon 2005: 15) with produce sourced globally and from South Africa. Shoprite and other supermarkets already source from South Africa to provide fresh produce for their African stores.

Walmart’s entry is also likely to intensify the move towards the use of specialised or dedicated wholesalers and away from spot markets for the procurement and distribution of fresh produce (Reardon 2005: 18). This may be accompanied by the ‘multi-nationalisation’ of wholesalers as they follow the retailers into new countries and regions. In Kenya smallholders have lost out as indirect suppliers to retailers because brokers (who

sourced produce from smallholders) have been replaced by dedicated wholesalers, who prefer to source from larger producers (Neven and Reardon 2004: 694).

Conclusion

We can readily recognise that these processes are already well under way in South Africa, and that Walmart's entry will not only intensify them but also bring some of these dynamics more forcefully into the region (Kenny, forthcoming). Ongoing research is required to monitor Walmart's practices in the next couple of years to measure the practical impact it has on smallholders, distributors and the practices of other retailers.

Of course, Walmart doesn't have supreme power and therefore what it wants and what may happen are two different things. Whether for supply into supermarket chains or into fresh produce and local markets, improving the productivity and quality of produce from smallholders remains an important task. Walmart may offer some opportunities for a layer of smallholders to 'upgrade' into supermarket value chains although most will be bypassed. It remains imperative to build alternative distribution channels. The supermarkets will not solve all the problems of food insecurity and the inability to distribute food to those in need in South Africa or beyond.

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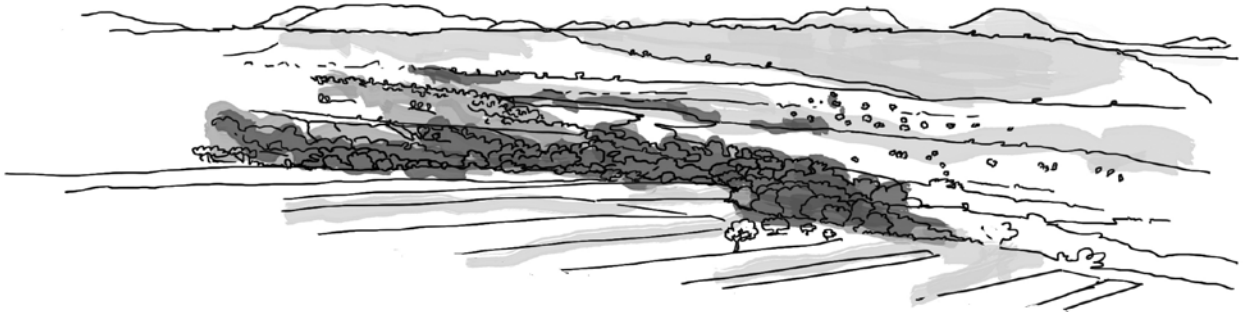
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Private sector and commercial farmer involvement in smallholder integration

Jack Armour



What are the current game-changers in SA?

The following dynamics in the agro-food sector will have major implications for smallholder integration into formal markets in South Africa.

- Massmart/Walmart has recently announced a R100 million supplier development fund, with a 30% smallholder procurement commitment. They have bought FruitSpot, a major fruit and vegetable wholesale and logistics company and 'poached'
- Woolworths' 'Farming for the Future' man Kobus Pienaar. This has the potential to shake up the existing very concentrated food retail sector.
- New Broad-Based Black Economic Empowerment (BBBEE) regulations with preferential procurement policies.
- Increasing competition from the rest of Africa as, with the help of mainly the Chinese, infrastructure is developed and markets opened up, bringing foreign investment and technology, including the new African 'Green Revolution'.

- Vodafone and Accenture released a research report in 2011 showing that mobile phones had the potential to add US\$138 billion additionally to the turnover of small-scale farmers in Africa.
- The much-publicised recent global trio of climate change (requiring a new energy economy), the global food crisis (leading to a rethink of concepts such as food sovereignty, and national and local food security), and the global economic meltdown (forcing a rethink on capitalistic greed and financial markets and systems). All of these point to corporate responsibility and long-term sustainability.
- The big 'What if?': What if the price of Brent Crude should double? Clem Sunter did a similar exercise for Anglo American in the mid-1990s, a decade before fuel shot up from \$40 to \$80/barrel (Visser & Sunter 2002). Would current value chains exist as they are today or would they look considerably different?

All of the above depict the environment in which smallholders, as well as the value chains they provide, will need to compete and survive. Conventional wisdom (mainstream economic and agricultural economic teaching) dictates that creating economies of scale is the means of reducing transaction costs to remain competitive. This theory may be sound with perfect markets, free trade, transparent and open information exchange and unlimited resources, but bearing in mind the above, we need to be very careful of the systems and structures we propose for integrating smallholders into value chains.

What is a smallholder?

Firstly it is important to know what is meant by a smallholder. Generally a smallholder refers to someone living on a plot of land on the peri-urban fringes. This definition however eliminates a large portion of previously disadvantaged South Africans who could potentially benefit from value chain integration. A proper classification of farmer typologies in South Africa is thus important. The following is an attempt:

- *Household supplementary growers.*
 - i. urban
 - ii. peri-urban
 - iii. rural
- *Subsistence farmers.*
 - i. mostly deep rural, whose main source of income is social grants
 - ii. peri-urban 'lifestyle' plot dwellers who have a main source of income off-farm in the urban labour market
- *Small-scale market-oriented commercial farmers.*
 - i. mostly family units with <10 workers
 - ii. land surface area may vary substantially, but this type has an annual farming turnover of <R500 000
 - v. own/rent, 1–3 title deeds usually in own name or family trust
- *Commercial farmers.*
 - i. manager – often a son or sons and >10 workers
 - ii. annual farming turnover R500 000–R10 million
 - iii. own/rent 3-10 title deeds with majority title held in trusts.
- *Industrial farmers.*
 - i. >1 manager and >20 workers
 - ii. annual farming turnover >R10 million
 - iii. land (>10 title deeds) often owned by a corporate holding company.

The typologies of the last three above differ substantially in the proportions of turnover, managers, workers, and surface-area – depending on whether extensive livestock (e.g. cattle/sheep grazing in open pastures) or intensive livestock (e.g. pigs, poultry, etc), extensive arable (crops), or intensive arable (irrigation/vegetables/fruit) or any of these combinations in a mixed farming system is practised.

The area within their dwelling erven is generally only utilised for growing their own vegetables, fruits or nuts by household supplementary growers. Community gardens are found in an urban setting, where residents live in flats or very cramped erven. These are generally run by NGOs and church groups and often adjoin clinics and schools. The area and accompanying yield per garden increases as one moves from urban to peri-urban to rural sites. Rural supplementary growers could also include commercial and industrial farm workers who have their own vegetable gardens.

If a small amount of excess food is produced by household supplementary growers, and if available for resale, local farmers' markets and home produce stores provide a good possible market for their produce. But with social grants for the lower-earning categories there is very little incentive, will or ability to supply these markets effectively. Even for the middle- and higher-income 'hobby farmers' the transaction costs of supplying these markets through traditional means may be exorbitant, unless a niche or novelty product is being produced.

Whereas household supplementary farmers grow or keep a few animals to complement their staple diet bought with household income generated from elsewhere, subsistence farmers, on the other hand, produce their own staples together with the supplementary growing.

Most white farmers in South Africa (StatsSA 2007) fall into the category of small-scale market-oriented commercial farmers. They thus do not consume their own produce, but sell it on the open market to purchase value added goods. However, they have very little to recapitalise their farms, or to save for retirement and the farm then becomes their old-age security. These farmers are highly susceptible to risk, but highly resilient through community structures and contribute to the fabric of rural society (e.g. wives are local teachers, medical workers, etc.).

To abide by preferential procurement policies of AgriBEE legislation, commercial and industrial farmers with turnover of more than R5 million, both in their own operations and to add value to locally produced products, will need previously disadvantaged producers to supply a certain percentage of the inputs and have a certain stake in the value-adding infrastructure. Although this regulation is not currently actively enforced, it is good business practice to have a system of incentives in place for workers/suppliers to boost initiative and productivity. It may enable cheaper funding through government/

parastatal incentive schemes. Increasingly, purchasers are requesting/seeking AgriBEE compliant suppliers to sell/tender to government institutions, and exports with a 'Fair Trade' logo also increasingly require compliance.

Critical factors for addressing the plight of smallholder farmers in the SA context

Training. A central database of videos of success stories would be a very important teaching and training tool. A good programme teaching basic economic literacy at school level is very much needed. An example of such a programme is the South African Foundation for Economic and Financial Education basic economic literacy train-the-trainer project presented by the University of the Free State in collaboration with the University of Minnesota.

Mentorship. Incentives are needed for farmer mentorship programmes to deal with the fears of commercial farmers. They could provide an attractive alternative for aging white farmers 'trapped' on their small-scale farms without successors.

Risk reduction. Risk management strategies (e.g. belonging to the local Fire Protection Association) and safety nets are crucial especially for subsistence smallholder farmers.

Comparative and competitive advantage. There is need for a thorough spatial development analysis. An analysis of comparative advantage should be conducted, identifying the optimal location of necessary facilitative infrastructure. The motto should be 'strategy before structure', but many government interventions follow the approach of 'structure before strategy' (e.g. setting up regional or local fresh produce markets at great expense but without first determining where demand will come from and identifying competition). The development of comprehensive provincial Agricultural Master Plans by comprehensive spatial analysis is important, (e.g. the Ministry of Agriculture's pilot at Giyani, Limpopo).

Access to markets (the transaction costs problem). A link between the smallholders and markets may be missing. Government is currently promoting the formation of

co-operatives, but empowering local entrepreneurial agents (National Rural Youth Services Corps – NARYSEC youth) with technology to access virtual markets may be a more effective strategy, as well as creating more jobs.

Marketing. The potential for Fair Trade-type labelling/branding to distinguish smallholder farmers has been discussed. The development of a community brand name for a niche market product or range of products may also create an agri-tourism spin-off in the community.

Challenges, threats and opportunities

International markets present a challenge in the form of cheap imports from subsidised countries. The trade-off is between protection of local producers against this unfair competition and cheaper food in the short to medium term. Agricultural long-term cycles are important to consider too: once farmers have been forced to stop producing a certain product they may sell the specialised equipment required to produce it. This makes a sudden re-entrance into the market very difficult when conditions become favourable again. A current example of this is wheat in South Africa: we are importing cheap, often subsidised wheat, losing local production capacity and potential with fewer farmers planting less area to wheat. One cannot destroy an industry and revive it the following year as economies of scale remain a critical reality.

Existing value chains are about:

- traceability
- consumer demand and attribute knowledge
- phyto-sanitary requirements (e.g. Hazard analysis and critical control points (HACCP) and EurepGAP)
- established brands and brand awareness
- bulk, uniformity and surety of supply.

With these 'barriers to entry', opportunities for smallholders lie in Fair Trade, local farmers' markets, organic production (potentially), a 'small farmer/smallholder-produced' logo, and a possible opportunity to tap into the Massmart/Walmart supplier development fund.

In the late 1980s the World Bank reported that smallholder farmers produced more than 50% of maize in Zimbabwe at the time. A logical conclusion for the Zimbabwean government was thus to pursue their controversial land reform strategy with a small-farmer focus. What they did not realise was that commercial farmers upheld the basic infrastructure: inputs, distribution storage and marketing that maintained the production value chain; and they also maintained viable rural communities. Hence the warning is not to neglect commercial farmers.

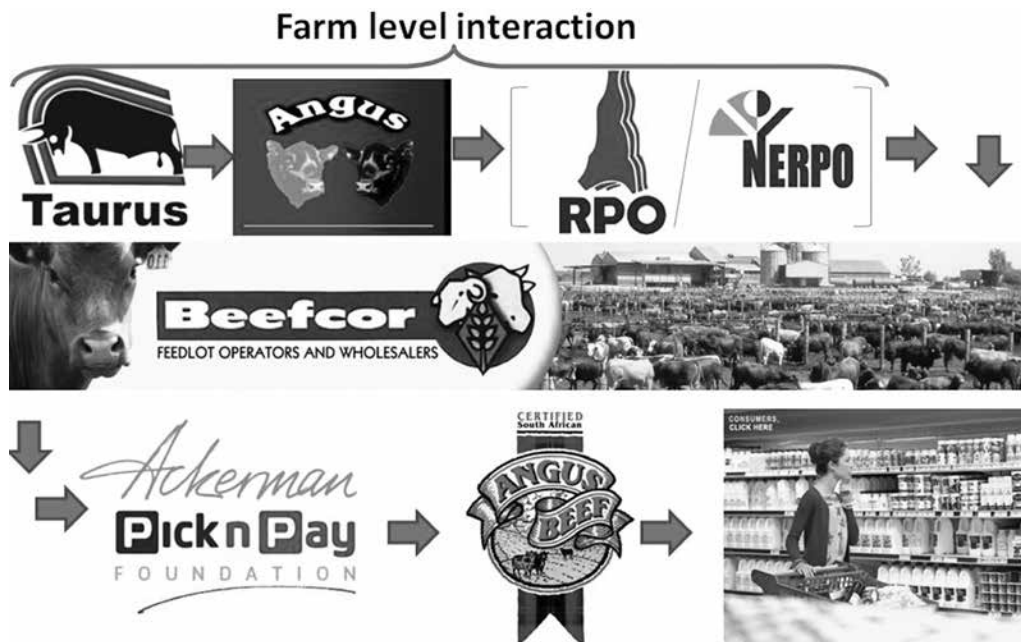
Thus, an entire value chain approach is required:

- Important strategic partners need to be identified and effective collaboration among these encouraged, including the Agricultural Business Chamber (ABC).
- Academic institutions need to be conducting research into value chains.
- Financers of value chain projects (e.g. the Industrial Development Corporation (IDC) has a value chain financing model and an agribusiness portfolio; the Land Bank has facilities to support sustainable business models and a wholesale funding facility).

Figure 1 below is a good example of a value chain approach negotiated by the Angus Breeders' Association with Pick n Pay's Ackerman Foundation. The financing component is not shown in this example since it was not needed.

Taurus provides good-quality certified Angus semen to inseminate smallholder farmers' cows (not necessarily Angus breed). As an AgriBEE initiative, the Angus Breeders' Association¹⁸ facilitated the process and also monitors and mentors smallholder farmers in Kestell, near Harrismith, together with the Red Meat Producers' Organisation (RPO)/National Emerging Red Meat Producers' Association (NERPO) commodity organisations. Beefcor has an agreement to take all the weaned animals that meet the Angus Beef criteria and grow them out in their feedlots to supply Pick n Pay to market as Certified Angus Beef (a brand marketed and familiar to a niche franchise and consumer segment). A key lesson is involvement throughout the value chain to get the right product required by the right consumer segment on the shelf. A Fair Trade label is a consumer requirement increasingly being sought by certain consumer segments.

Figure 1: A value chain approach negotiated by the Angus Breeders' Association and the Ackerman foundation



We should recognise the diversification of economic activities on rural land. Potential small enterprises that can be conducted on smallholder farms include:

- energy farming (e.g. bio-fuel from algae, wind/solar farming, biogas, silviculture)
- agri-tourism (e.g. KZN Midlands Meander)
- niche markets
- further processing of '3rd grade' products from large main processing facilities, i.e. 'beehive industries' utilising the by-products, such as a bone meal plant at an abattoir, a jam factory using the overripe fruit at a packhouse or an alcohol distillation plant utilising the rotten fruit.

Niche markets involve the differentiation of food from the bulk commodity foods. For example, healthy and natural alternatives to the Kelloggs, Kraft, Nestle global food brand names; natural additives, organic, essential oils, high starch 'waxy' maize for the specialised snack food industry, and high oleic sunflower oil under contract from Vergezocht Oil Plant, etc.

The structures and potential role of organised agriculture

Within the structures of Free State Agriculture, as a provincial affiliate of AgriSA, we have a Transformation Committee and a Farm Management Committee which could lead the negotiations in lobbying for and organising individual farmers for entering agreements with value-adding companies. This could be managed and coordinated by our Municipal Liaison Committees, our locally based agricultural forums, which include locally based agribusiness, co-ops, banks and others. Agricultural forums are the ideal vehicle to identify the rural town comparative advantage/potential and on the basis of this to devise a community business plan for incorporation into the Integrated Development Plan (IDP) of the local municipality.

The Infrastructure sub-Committees oversee and lobby for maintenance, improvement and reasonable pricing of telecoms, roads and energy supply in the rural areas: a crucial infrastructure for effective production and value adding.

Using technology: an example of cellphone marketing

The use of mobile phone technology as the core of a business model has the potential to bridge the economic divide between subsistence and commercial farmers. In the South African context this means providing a market-based incentive for the 2.7 million subsistence and backyard home gardeners (Aliber and Hall 2010) to market their excess produce at virtually no transaction cost. This could potentially provide 1 million additional jobs, dramatically improve local food security, revitalise backward rural economies and facilitate the graduation from small-scale to commercial farming, thus adding to the much needed pool of suitably experienced potential beneficiaries for land reform projects in South Africa.

The holistic integrated systems approach is applied to the concept. In short:

Information and communication technology (ICT) platform. Using a basic mobile phone, a producer of any quantity of produce, no matter how small, can place a geo-referenced log of the produce, on a centralised database platform listing various product attributes (see Figure below).

The agent – primary function: Entrepreneurial market agents (a NARYSEC¹⁹ student to be trained to access the database), using a GIS-enabled smartphone, can either:

- calculate the shortest route to fill their e.g. 1 ton pickup, or
- scan within an x radius of how far they are prepared to travel, what is available or
- calculate what is the shortest route to complete an order for xyz product/s.

The local agro-processing hub. Agents (the NARYSEC entrepreneurs) have facilities at the local small town agricultural hub/agribusiness cluster to further process the raw produce into the form required by the formal agricultural markets and retailers, thereby stimulating rural revitalisation, job creation and place-of-origin branding. The virtual market database is centralised but somewhere a link is needed to amass the smallholder products into

the format required by the formal first economy markets. There are current government programmes and plans budgeted for strategic agro-processing hubs. The key lesson from the former homeland business hives is that market forces best dictate where these should be located. As soon as there is political interference a white elephant is created.

Figure 3 shows an example of a planned cluster to facilitate infrastructure for local market value-adding facilities.

The agent – extended functions. Agents effectively become extension officers: suppliers of market information, suppliers of inputs and micro-finance to the small growers, catalysing the formation of small co-operatives, and facilitating the transition from subsistence to commercial market-oriented agriculture. Agricultural extension officers will be tasked to educate smallholders about the virtual market and how to use it, and word of mouth and social media can also be used to spread the word. Agents may be anyone who uses the programmes and sees the potential. NARYSEC youth will also be trained to complement their community participation and facilitation skills. They are expected to take back their know-how to the local communities from which they were selected.

Potential niche/brand. The database platform can also be used by marketing agents to bypass the traditional oligopolistic fresh-produce marketing system and sell directly to the retail sector under a niche market brand that stands for *inter alia* Fair Trade, minimal travel costs, efficient resource use, and so on.

Most of the ICT components required for the above already exist as individual applications, but an integrated seamless connection of these does not, as far as the author is aware. For example, Google Trader, Google Maps and M-PESA exist on their own. But there is no dedicated database to build up a track record (for example, as in E-Bay) to:

- i. capture all valuable market information for analysis and research;
- ii. use an application that works out the shortest route from current position to the geo-tagged trades advertised on Google Trader;
- iii. use an application to book the trades and request mBanking²⁰ details for payment on delivery; and

Figure 2: Proposed schematic of the virtual agricultural market database populated and accessed by mobile phones

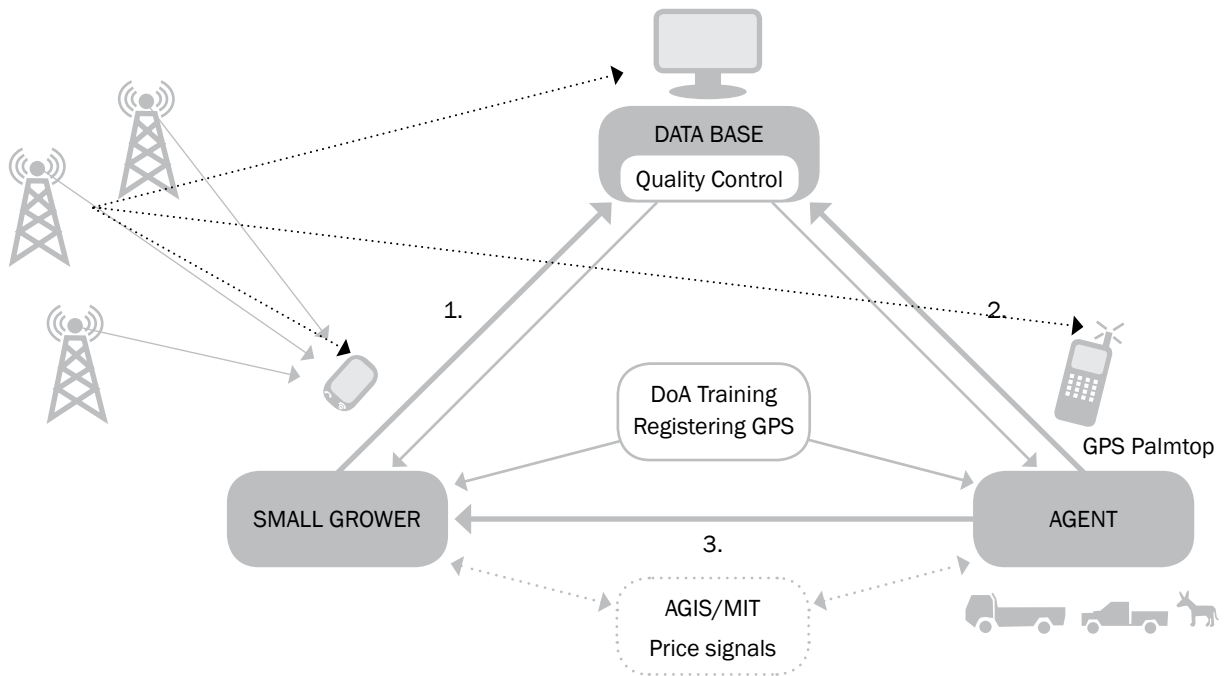
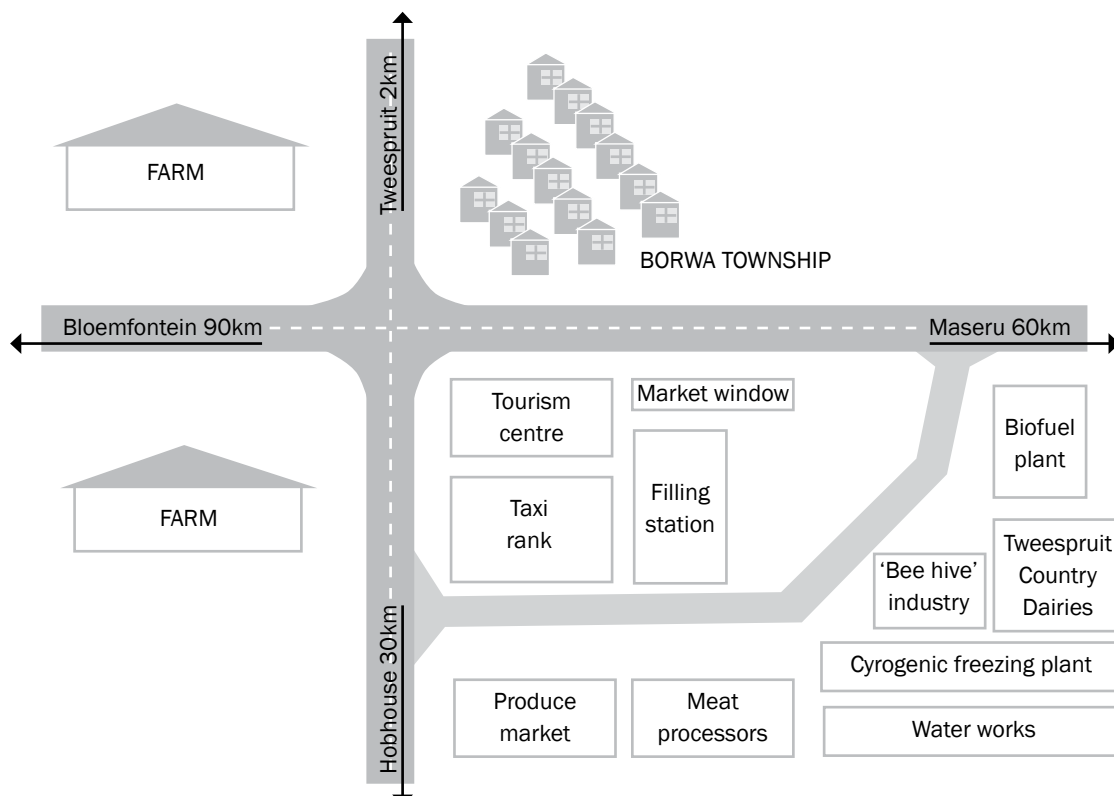


Figure 3: Planned Tweespruit Agribusiness Cluster



- iv. use a platform to evaluate the concluded trade rating by both the seller and the agent.

The human resources (agents) and physical infrastructure (3G coverage and network of local agro-processing and logistics hubs) on the ground required to make the system successful are also crucial components. The National Planning Commission and government budgets are prioritising these investments.

This paper is a plea to bridge the digital divide between farmers, agricultural researchers, extension officers, government officials and practitioners on the ground dealing with the physical aspects of growing food. They know and experience the real problems and the often very distant ICT programmers and developers. As an integrated team, working together with the correct structures and systems in place, we could do far more toward achieving improved livelihoods and food security in Africa. The challenge is thus to bring the locally applicable supply of ICT applications and demand for these together at grassroots organisations level, and not just at international research and development/NGO level.

Conclusion

For effective integration of smallholder farmers into traditional and new food value chains the following is required:

- *Embrace new technology available.* Access available information, group and mobilise effectively as necessary so as to transact effectively and efficiently.
- *Fully equip NARYSEC learners with this new technology.* Teach them the skills to identify value-adding opportunities in the areas from where they come, and equipping and supporting them fully with effective linkages at local government, agricultural extension, organised agriculture, and through these to facilitate direct linkages with existing agricultural value chains and enhance their ability to create new locally-specific and niche value chains.

- *Smallholders to organise into smaller sub-groupings of local agricultural association.* This will create efficient and effective win-win relationships, where experienced farmers can provide mentorship and basic assistance to the smallholders and in return, improve AgriBEE ratings.

We can come closer to achieving the transformation objectives in South Africa, while simultaneously addressing the fears of commercial white farmers by promoting and facilitating the transition of large-area, market-related small-scale farming to small-area, intensive-farming with well-established value chain linkages. That is, create incentives for low-capital, low-turnover, extensive land owners to move horizontally. For example agri-villages closer to the cities to free up the extensive farms they were on for land reform. This ensures a future in agriculture but on small-scale, highly intensive farming operations while still retaining institutional knowledge. This may be a means of effectively freeing up land surface area for land reform.

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Urban agriculture, livelihood strategies and commodity networks in inner-city Johannesburg: a case study of a vegetable co-operative in Bertrams

Marc Lewis



Introduction

This study will assess the effectiveness of three peri-urban food production initiatives in Johannesburg in addressing food insecurity and livelihood creation. The original intention was to focus on 'organic'²¹ producers and their (in)ability to access niche organic markets. This focus has since changed to include producers who have been introduced to the idea of 'organic' but may not be practising it for various reasons. The intention is to uncover why smallholders do not access these well-resourced niche markets when the demand for 'organic' produce in urban Johannesburg is so high and, when they do, why is this the case?

The specific aims are to:

- i. document the key features of smallholder vegetable production in Johannesburg, in particular in relation to key components of the vegetable value chain (acquiring farming inputs, securing a supply of labour, organising production, and marketing of produce);
- ii. uncover which organisational features of these projects facilitate, and which obstruct, their social and economic sustainability; and
- iii. provide an interpretation of the long-term prospects of these projects for reducing poverty in urban and peri-urban areas and sustaining the livelihoods of small-scale producers in these areas.

Decentralised urban food production programmes have been shown to alleviate food insecurity in developing and middle-income countries like Cuba, specifically around Havana (Chaplowe 1998), and Brazil (Winklerprins 2002; Padoch et al 2008; Chaplowe 1998). Urban agriculture is also popular in the Global North, particularly in the United States (Feenstra 1997; Travaline and Hunold 2010) and across the United Kingdom (Howe 2003) and is fast providing examples of how to produce food more efficiently (closer to consumers) and effectively (making use of urban resources that are otherwise seen to be waste products e.g. compostable materials and storm and grey water. Yet, in southern Africa, research has shown that only 7% of urban residents obtained food from urban agriculture (Wood 2009: 5).

Promoting alternative food networks in the urban and peri-urban areas of South Africa, where "production and consumption of food are more closely tied together spatially, economically and socially" (Goodman and

Goodman 2007: 2) could alleviate food deficiencies, promote local economic development, and enhance livelihood strategies.

Currently, urban resources in South Africa are not optimally utilised to produce food (food and garden waste products are sent to waste sites and mostly are not returned to the urban spaces). There are scattered food production projects in some cities although not nearly enough to meet the burgeoning demand from the bustling urban masses. Alternative food networks offer possible marketing channels for smallholder producers that bypass the conventional regulated channels that govern commercial food supply chains. The organic sector in Johannesburg is failing to source produce and seeks solutions. Are urban smallholder producers able to fill this gap? What other supply channels are used by these smallholders and how will a new market for their produce affect current food networks?

A value chain analysis ascertained through the commodity network approach (Raynolds 2002; Raynolds 2004; Bolwig et al 2010) provides insights into these 'other supply channels' or alternative chains and what the reasons are that make it difficult for smallholders to access highly lucrative organic value chains. This is done through an analysis of the "institutions and relations of power" (Raynolds 2004: 725) incorporating a political economy approach to ask: "Who owns what, who does what, who gets what and what do they do with it?" (Bernstein 2010: 22).

For the purpose of this paper the writer made use of the commodity network approach to analyse the Bambanani Food and Herb Co-operative. The approach "sharpens analysis of a) the power of symbolic and discursive, as well as material, relations in configuring producer/consumer transactions; b) the multiple social and political, as well as economic, actors and actions which comprise and control commodity networks; and c) the quality conventions which shape meanings, govern exchanges, and concentrate power in commodity networks" (Raynolds 2004: 737).

Bambanani Food and Herb Co-operative

Bambanani Food and Herb Co-operative ('Bambanani') is on 0.5ha of land in inner-city Johannesburg leased by the

City of Johannesburg's Social Cohesion Directorate. The project provides a base for a diverse set of livelihoods for some of Johannesburg's urban poor. Produce is sold to the informal sector through farm-gate sales and through more formal channels: Spar, Fruit and Veg City and at urban farmers' markets. The project has used organic methods to produce and continues to do so, even under considerable production constraints that include limited capital investment opportunities, high rodent populations and insect infestations.

The writer documented the nature of the commodity network for Bambanani. To do this the network was unpacked into six categories: inputs, production, processing, transport and storage, supply, distribution and marketing, and retail. The data are reflected here, followed by a brief interpretative analysis of this data:

Inputs

- *Labour.* Thandi²² (the most active of the co-op members) pays two labourers, Xavier and Bongani, from daily sales. Devji (partner in the co-op) has his own sections of the garden and sells to various retail outlets in the near vicinity.
- *Land.* Access to the site is maintained through productive use of the land and through active service to the community. A City of Joburg Property Company²³ lease was recently renewed for continued use of the space (leased to the City of Joburg Social Services).
- *Seed.* The Social Services Operations Officer purchases seed, the Gauteng Department of Agriculture (GDoA) delivers, and seed is saved.
- *Tools.* Bought with money won through prizes awarded to the Garden (GDoA prizes in 2009 and 2011).
- *Water.* Social Services pay for water used, i.e. "as much as the plant wants".
- *Electricity.* Social Services pay for electricity (kettle, lights, electric two-plate).
- *Pest control.* Use marigolds and intercropping techniques²⁴.
- *Fertility.* Bounce Back (organic fertiliser) bought in 2009, while they also generate their own compost.

Production

- Thandi produces according to local preferences. Devji produces an "Indian line" for the Indian community in which he lives and to which he delivers with his own car.

Processing

- Produce is washed on site and packed according to the purchaser's preference.

Transport and storage

- Produce is sold on-site. When transport is available and produce is abundant it is taken to a nearby weekly farmers' market or to the local Spar and Fruit and Veg City. Produce is picked and sold immediately and there is no need for storage.

Supply, distribution and marketing

- The project is next to a Rea Vaya (Johannesburg bus system) bus stop and is located on a busy taxi and pedestrian thoroughfare. The visibility of the project is a valuable marketing tool. The centre is also used for community crèche meetings and has a constant flow of people. The garden's closest neighbour is the Ellis Park stadium.

Retail

- There are retail options in the near vicinity but lack of transport makes this an irregular sales opportunity.

The project is one of the City of Johannesburg Human Development Directorate's community development activities and is provided with support as deemed necessary by the directorate's regional coordinator, Rebecca²⁵. The co-operatives working in the garden are required to take advice from Rebecca. Thandi works at the project six days of the week and manages the bulk of the available space. Thandi sourced Xavier and Bongani ('the labour') from the street (they were homeless and had asked for work) and through negotiation Rebecca agreed to give them accommodation in the small store rooms on the property and a share of the takings from the daily sales for their labour. Through participant observation the writer discovered that there was some conflict between the labour: Thandi and Rebecca about time spent working (who does what); and remuneration (who gets what). Currently there is a steady flow of income from sales that provides between R50 and R100 a day for each of the labourers, but this is not always evenly

distributed, hence the conflict. One source of conflict is that it is not always clear how much produce is sold, how much money is made and how that fluctuates throughout the year. A transparent system of sales may alleviate some of the disagreements.

Devji has separated from the co-operative group and has negotiated his own production space with Rebecca. He does not employ labour and completes all tasks on his own. Use of the land is based on productivity. Bamabanani can use the land only if they keep it productive, sell to the local population and involve the local community in some of their activities. This form of tenure is highly insecure and is largely based on the relationship between the regional co-ordinator and the co-operative members. The regional co-ordinator thus holds considerable power over the members and is able to make decisions on their behalf with little to no consultation.

The relationship is not entirely negative, and in some instances has brought the garden much-needed funding. In 2009 and in 2011, for example, the project won prize money of R10 000 and R20 000 respectively for a Gauteng Department of Agriculture (GDoA) annual award²⁶. The project used this money to buy inputs (seed and fertilisers) and installed an irrigation system with additional water points. Although Thandi and her helpers put in great effort to win these prizes, credit can most certainly be given to the relationship between the co-operative and the regional office. Seed is also regularly provided due to this relationship and is mostly why the project members discard seeding crops. Some seeds, however, are saved and replanted, although pressures from Rebecca to “keep the garden productive and tidy” limit the potential for this.

Production decisions are based on the demand. For Thandi, produce is primarily grown for the local population. As Thandi stated, “The community likes chamolia, pumpkin leaves, tepe²⁷ and Chinese spinach [...] The market likes rosemary, dhanian, thyme, basil and spinach.” Thandi and Rebecca do not always agree on what should be planted. Thandi allows tepe to grow as her customers regularly ask for it. Although Rebecca is aware of the value of tepe – nutritionally and from a taste perspective – she still considers it a weed and an unsightly plant for the garden. On many occasions, but only when Thandi is not at the garden, Rebecca will order the workers to “clean an area”. Thandi is very distraught when she finds that plants that could have made a small amount of money have been taken out and thrown onto

the compost heap. She describes how her customers will now have to wait for the conventional crops to grow before they can buy from her. Herein lies the conflict: where Thandi wishes to meet the demand of her local client base, she is often prevented from doing so by Rebecca’s belief that she knows better what to grow in the garden.

Devji, on the other hand, has full control of his space and has no interference from Rebecca. He produces red herb, dhanian, and ‘Indian beans’ that are some of the staples of Indian cooking. He plants according to demand and is not hindered in his endeavour.

The only value-adding activity practised by Thandi is washing produce and placing it into a packet.²⁸ Mostly she will not even wash the product. Devji picks, washes, and bundles his produce according to retailer requirements.

Rebecca provides transport to the various market spaces, but only when she has time. A problem arose recently where Thandi had picked three cartons of lettuce for a local farmers’ market in Killarney Mall. She picked in the early morning and hoped to be at the market by 7h00 to sell the produce. Rebecca had said she would provide transport but called later to say she was unable to do so. Owing to the lack of cold storage and no alternative transport, an opportunity to sell to a middle-class market and earn a bigger income from the lettuce was lost. Lettuce is not a popular farm-gate sale, and in this case it went to waste.

The project is located directly across the street from a Rea Vaya bus rapid transport station and is in clear view. Many people working in the area use the transport and many call in at the garden to request produce for their evening meals. Consumers buy fresh produce each day and take it home for their meals. This is ideal for perishable produce such as pumpkin leaves that need to be cooked as soon as they are harvested. Also, as the regional offices are used for community crèche meetings, there are often large groups of women who attend these meetings who have all developed a relationship with Thandi and buy her produce. Thandi stated that “the community knows it is cheap and fresh and that they can get things like pumpkin leaves.”

Thandi takes produce to retail outlets when she has excess and when transport is available. She does not receive a good price for her produce here, but it does help when her abundance is not bought by the farm-gate

consumers. Devji sells mostly to the retail sector. He does not make much money from these sales and it would seem that he is also selling off excess that he himself is not able to consume.

Conclusion

One would think that access to retail markets would benefit urban smallholders. In this example the writer found that selling produce to these retail markets does not always benefit the producer positively. Having the retail market option available for sale of excess produce benefits the producer, though having a formal contract with a weekly supply requirement may not be so beneficial. In particular, cross-border migrants in the area have made this garden a daily stop on their way home from the market as they cannot find pumpkin leaves (chibagwa) at the market and therefore source it here. Johannesburg is bustling with foreign migrants with differing vegetable palates. This garden project has taken advantage of such demand and accommodates it as best it can. Even with the multitude of constraints, small producers are able to understand a niche market demand, plan for it and then supply to it.

Thandi, however, has not been able to take full advantage of this demand as she neither has control over how the garden operates in terms of what to plant nor which markets to supply. Currently the co-operative members have conflicting views on what is best for the group, with some who believe that larger and more regular markets will be more lucrative and of benefit to all. With no transport or refrigeration, a larger operation seems unlikely to succeed. Unfortunately, Thandi's lack of real influence over such decisions makes it likely that her efforts will be thwarted so her customers will be left to buy the more 'common' green vegetable varieties at more formalised retail outlets.

This commodity network is important to consumers in the locality and it should be encouraged and supported to provide for their needs. If the project is to expand production and increase market access it would be wise to embrace both market avenues – the local consumer network and localised retail outlets – to ensure guaranteed supply channels. Even without refrigeration or transport, more regular and larger supply avenues could be secured through joining with other local supply or through establishing relationships with local niche retail groups who collect produce on a weekly basis.

In addition, further market research can be done to increase the variety of supply to local residents, increasing the production of cultural foods such as pumpkin leaves and tepe varieties, thereby satisfying the increasingly nuanced demand found in Johannesburg's urban residential spaces. Currently Bambanani is undergoing an assessment process by the Participatory Guarantee System South Africa (PGSSA)²⁹. If the garden is awarded this stamp of assurance they will be permitted to supply the Bryanston Natural and Organic Market in the northern suburbs of Johannesburg. This will change the demand pressures on the project considerably and it will be of interest to see whether the project is able to adapt their strategy to supply this market and how it will affect the local supply.

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'Accumulation from below' and the Tugela Ferry irrigation farmers

Ben Cousins



Abstract

A key question in debates on agrarian reform in South Africa is how the potential for small-scale farming, in conjunction with redistributive land reform, can make a significant contribution to employment creation and poverty reduction? It is difficult to answer this question: two key problems are the paucity of reliable data on small-scale agriculture, and lack of clarity on the meaning of terms such as 'smallholder' and 'small-scale farmer'. This article applies class-analytic perspectives on social differentiation to critically examine these terms, and explores the prospects for 'accumulation from below' through agrarian reform, drawing on wider debates within the southern African region. It presents research findings on the production and marketing of fresh produce in one such scheme in Tugela Ferry, KwaZulu-Natal. Survey data shows that farming households combine agriculture and various forms of off-farm labour, and that accumulation from below is constrained by a number of factors, including an inherited and largely untransformed agrarian class structure. In this context, expanded access to land and water is a necessary, but not sufficient, condition for accumulation from below.

Introduction

Can a greatly expanded small-scale farming sector, in conjunction with redistributive land reform, make a significant contribution to rural development, employment creation and poverty reduction in post-apartheid South Africa? This question has been hotly debated since the transition to democracy in 1994 and continues to generate controversy. Some recent national policy documents which seek to address the very high levels of unemployment found in South Africa have answered in the affirmative. The *New Growth Path* (EDD 2010), for example, proposes to create opportunities for 300 000 households in 'agricultural smallholder schemes' by 2020, and the National Planning Commission's *National Development Plan* (NPC 2011: 197) states that one million new jobs can be created in agriculture and related industries over the next two decades, mostly through labour-intensive forms of small-scale farming in communal areas and on redistributed land, with many engaged in irrigated farming (NPC: 201-04).

These targets for smallholders are very ambitious, given that the total number of black households engaged in

small-scale farming has remained at almost the same level over the past decade and a half, and that land reform is widely acknowledged as not having created conditions for successful small-scale farming to date (Aliber and Hart 2009; Aliber and Hall 2010; Greenberg 2010; Hall 2009a). Are they feasible? Sceptics abound (e.g. Sender and Johnson 2004; Palmer and Sender 2006), often on the grounds that there is little evidence (in the South African context) to support the view that smallholders are highly productive, or that land reform is enabling the rural poor to improve their incomes to any significant degree.

Two key problems hinder the policy debates. One is the paucity of reliable and detailed empirical data on small-scale farming in South Africa, and in particular on farming engaged in by land reform beneficiaries. The second is conceptual: what exactly is meant by the terms 'smallholder' and 'small-scale farmer' is often very unclear. The recent literature does acknowledge that these terms are somewhat imprecise, and that key differences exist within the ranks of small-scale farmers (see for example Aliber et al 2009), but the criteria used to define such terms tend to be inconsistent (Cousins 2011). A commonly made distinction, with a long provenance in South Africa, is between a large group of "subsistence or semi-subsistence" farming households and a much smaller number of commercially oriented, "semi-commercial" or "emerging commercial" smallholders (Bembridge 1986; Nicholson and Bembridge 1991; Vink and van Rooyen 2009). This echoes the mainstream international literature on agricultural development, where the term differentiation is increasingly in use. Wiggins (2009: 14), for example, argues that surveys "often show that the bulk of marketed output from small farms comes from those that are towards the upper part of the range [of farm sizes], and thus that "there is considerable differentiation among small farms" (Wiggins 2009: 15). Rarely addressed are the causal processes which might explain how such differentiation among small farmers comes about.

This chapter aims to contribute to current debates on small-scale farming and agrarian reform in southern Africa. It focuses in particular on smallholder irrigation farming, which might well become a key focus of agrarian reform policy in future, if the National Planning Commission's recommendations are taken seriously. The article applies a class-analytic approach to the understanding of social differentiation within small-scale agriculture, drawing on debates on the agrarian question in the wider

southern African region. Preliminary research findings are presented on small-scale production and marketing of fresh produce in a century-old irrigation scheme in Msinga, a densely settled communal area in the province of KwaZulu-Natal. Household survey data allows income from such production to be located within the whole range of livelihood strategies that farming households pursue. In the light of this empirical evidence, the chapter assesses the potential for accumulation from below in Tugela Ferry and in South Africa more generally.

Smallholder farming, class dynamics and ‘accumulation from below’

Contemporary policy debates on small-scale farming and agrarian reform, both in South Africa and in the broader region, tend to ignore questions of their class dynamics. A key term used by many is ‘smallholder’, but this is problematic because it suggests that small-scale farmers form a relatively homogeneous group and obscures the causal processes through which rural inequalities emerge, and often results in misleading assumptions of common interests in attempts to organise and mobilise “the rural poor” (Cousins 2011).

In contrast, a class-analytic perspective, centred on the concept of petty commodity production, allows an understanding of the differentiated character and diverse trajectories of small-scale agriculture within capitalist economies (Bernstein 2010). These processes mean that there is a generalised tendency towards class differentiation in the countryside. In Lenin’s (1967) classic text, *middle peasants* are able to meet the exigencies of simple reproduction from their own efforts, and *poor peasants* are unable to survive without ‘squeezing’ either their capital or their labour power or both. Over time they may be forced to rely almost wholly on the sale of their labour power in order to survive, becoming either proletarians or semi-proletarians (if they continue to engage in some level of agricultural production). *Rich peasants* are able to engage in expanded reproduction, and may be transformed over time into capitalist farmers.

It is clear, however, that the conventional typology of rich, middle and poor peasants is difficult to apply in the southern African context. This is because capitalist development involved the creation of circumscribed ‘native

reserves’ alongside the appropriation of large areas of productive land for an emerging (white) capitalist farming class, constraining the emergence of (black) petty commodity producers. Rural households located in the reserves or on white-owned land were forced to send (male) members to sell their labour in order to earn the cash they needed to buy essential consumption goods and to pay a range of taxes, thus supplying labour to emerging mining and manufacturing sectors through a highly regulated migrant labour regime. Accumulation by white/settler farmers was underpinned by the use of poorly paid African labour in exploitative forms of sharecropping, labour tenancy and wage labour, as well as forced labour in some contexts (O’Laughlin 2002). Male migrant labour was ‘cheap’ because rural households in the reserves and on labour tenant farms reproduced themselves in part through their own agricultural production, in which women played the leading role, which in effect subsidised low wages (Wolpe 1972). The migrant labour system was regional in character, and ‘native reserves’ functioned as labour reserves across the region, with mines in South Africa as the epicentre of the system, but with some migrant labour found on farms and in other sectors too.

Opportunities for agricultural producers in the reserves to become successful petty commodity producers were not entirely absent, but were limited by discriminatory policies aimed at promoting (white) settler farming or ensuring the supply of cheap labour to other sectors of the economy. Agricultural production was negatively affected by the absence of male labour as well as by overcrowding, growing shortages of productive land, and lack of investment in infrastructure. The regional labour regime that underpinned capitalist development was a key component of a complex political-economic structure which wove together inequalities of class, race, gender and age as well as urban, rural and national locality.

O’Laughlin’s (1996: 7-10) critique of the shortcomings of dualist perspectives on the agrarian question in Mozambique highlights the complexity of class dynamics in the rural areas of the region. In a nuanced analysis of colonial and post-colonial land and labour regimes in different regions of Mozambique, she calls attention to the diverse ways in which rural people had to organise production and social reproduction as the commoditisation of the rural economy proceeded. She contrasts systems of (regional) migrant mine labour in the south of the country, forced labour for large plantations in the centre, forced cultivation of cotton in the north, the production of

hybrid maize for sale by small farmers in areas along the borders of the country, and specialised peasant production of wheat, rice, maize and cotton in specific locations.

Social differentiation of rural households did not proceed in a linear and neatly stratified fashion, but combined two analytically distinct processes:

- i. 'diversification of rural livelihoods' – via variable combinations of own production and different forms of wage labour; and
- ii. 'class stratification' – the emergence of sharp differences in control of land, cattle and implements (the means of agricultural production).

In O'Laughlin's view these processes "may proceed together with the expansion of the market and wage labour relations under capitalist development, but their rhythm is not necessarily the same, and "colonial policies on land, labour and local governance in Mozambique led to a complex non-dualistic agrarian class structure in which diversification of rural livelihoods outstripped class stratification" (O'Laughlin 1996: 6-7). The generalisation of wage labour relations meant that most rural households needed income from off-farm employment to establish and maintain agricultural production; this interdependence remains and is a reality across the region (O'Laughlin 1996: 35).

A different schema for assigning class identities to smallholder farmers in Southern Africa has been proposed which takes account of the inter-dependence of wage labour and land-based livelihoods and the hybrid identities this generates. For post-independence Zimbabwe, Cousins et al (1992) distinguish between petty commodity producers, worker-peasants, unschooled semi-peasants and a rural bourgeoisie. For South Africa, Levin et al (1997) propose the following categories: a petty bourgeoisie, petty capitalists, worker peasants, allotment-holding wage workers, and a rural proletariat. More recently, I proposed a typology for South Africa that distinguishes supplementary food producers, allotment-holding wage workers, worker-peasants, petty commodity producers, small-scale capitalist farmers, and capitalists whose main income is not from farming (Cousins 2011). All such schema run the risk of suggesting that clearly defined class identities with distinct interests already exist or emerge over time, and that they can be readily targeted by specific policies or programmes. An alternative approach is to accept that there is a general tendency

to class differentiation, but that it is always mediated by other 'determinations' in particular circumstances, and thus subject to a range of locally specific dynamics, including intersections and combinations of class with other social differences such as gender, age, ethnicity, race, religion and caste (Bernstein 2010: 115)³⁰.

Accumulation from below

A class-analytic perspective clarifies the strategic focus of land and agrarian reform. Hall (2009) has recently suggested that rural development must both support food production by the poor and promote rural entrepreneurs who can engage in 'accumulation from below', arguing that between the poles of tiny food-security gardens on the one hand, and huge commercial farms on the other, is a 'missing middle' – the untapped potential of smallholder farmers able to produce a marketable surplus. In this perspective, land reform and accumulation from below are necessary to reconfigure a dualistic and unequal agrarian structure which is itself a structural cause of poverty.

Accumulation from below, in contrast, implies that the inherited agrarian structure is radically reconfigured so that much larger numbers of people begin to participate in the agricultural sector and benefit substantially from such participation. However, it also suggests that these new producers must be able to produce at least as much (if not more) than large-scale commercial farmers, replacing them in supplying local, national and international markets. Beyond the household food security of small-scale producers and the rural poor is the critical issue, sharply posed in the classical agrarian question, of how agriculture can contribute to the economic development of society as a whole, support a growing urban population, and help reduce structural unemployment.

Only some small-scale, family-based farmers are likely to ever meet the productivity challenge, in part, because high-potential land is so scarce in South Africa. In addition, inequalities in land access, livestock holdings, and sources of finance within rural populations suggest that class differentiation already exists to some degree. Successful petty commodity producers and wealthier 'worker-peasants' will be better placed to benefit from agrarian reform interventions than those for whom food production is only a minor supplement to their livelihoods.

Successful accumulation from below, then, would necessarily involve a class of productive small-scale capitalist

farmers emerging from within a larger population of small-scale farmers. All these categories are legitimate beneficiaries of land and agrarian reform policies aimed at poverty reduction, but only those able to fully utilise the productive potential of the country's scarce land and water resources and engage in significant on-farm investment, are likely to be able to compete effectively with large-scale forms of commercial agriculture. Accumulators from below are potentially a much larger group than existing large-scale farmers (of which there are approximately 37 000), perhaps four to five times as large, but even so they would clearly constitute a minority of the rural population as a whole.

Tugela Ferry irrigation scheme

Are processes of accumulation from below taking place in post-apartheid South Africa on a significant scale? If not, does the potential exist for policy interventions, including

land reform, to create the enabling conditions for such processes? This section examines the evidence in the Tugela Ferry Irrigation Scheme in Msinga. The Scheme is located in the Midlands region, falls within Msinga local municipality, and is close to the small town of Tugela Ferry. The scheme is among the largest in the province, one of only four greater than 500ha in extent, and covers an area of 840ha of high-potential soils. Around 540ha are currently under cultivation by between 800 and 1 000 producers (EVN Africa 2010: 5), who probably comprise 15% of all smallholder irrigation farmers in the province. Water is drawn from a diversion weir across the uThukela River and distributed via a main canal, holding dams and smaller distribution canals. Within the beds, crops are irrigated using the short-furrow system. Siltation, cracks, leaks and dysfunctional holding dams – the result of inadequate maintenance and repair work since the 1960s – are major problems. A R20-million government-funded repair programme is currently under way, under the auspices of the Comprehensive Rural Development Programme.

Table 1: Positive gross margins for maize, tomato, sweet potato and cabbage crops

Crop	Number of growers making a profit (n)	Profit makers as proportion of all growers (%)	Positive gross margin (mean)	Positive gross margin (median)	Range
Maize	30	91%	R1439	R1344	R208 – R2916
Tomatoes	12	46%	R3166	R3545	R17 – R7163
Sweet potatoes	16	73%	R1172	R1243	R240 – R2785
Cabbage	5	56%	R3840	R4450	R1394 – R5146
All four crops	64	71%	R1868	R1367	R17 – R7163

Table 2: Negative gross margins for maize, tomato, sweet potato and cabbage crops

Crop	Number of growers making a loss (n)	Loss makers as proportion of all growers (%)	Negative gross margin (mean)	Negative gross margin (median)	Range
Maize	3	9%	R340	R106	R208 – R2916
Tomatoes	14	54%	R790	R782	R15 – R898
Sweet potatoes	6	27%	R300	R355	R9 – R1790
Cabbage	4	44%	R300	R355	R410 – R997
All four crops	26	29%	R644	R577	R9 – R1790

At present only a few plots are used to grow crops primarily for home consumption. In contrast to the Bantustan-era smallholder schemes described above, farmers here do not hold 'standard' plots of around one hectare, but cultivate variable numbers of small individual 'beds', or plots, known locally as *umthathe*³¹. These range from 0.08 to 0.15 hectares in size, with a mean of around 0.1160 hectares.

The economics of crop production

Detailed data were collected on 106 individual crops grown between 2009 and 2011: green maize, tomatoes, sweet potatoes, cabbage, beans, onions, spinach and butternut squash. Labour was hired in on a piece-work basis for 77% of the crops and generally paid in cash, except in relation to harvesting and marketing, when payment was mostly in the form of crop produce. Gross margins, both positive and negative, for the four main crops represented in the sample are shown in Tables 1 and 2³². These show that maize and sweet potatoes are more reliable crops than tomatoes and cabbage, but are also less potentially profitable. Of the individual crops, over 70% were profitable, and in the case of some tomato and cabbage crops, highly profitable (with average gross margins of over R3 000 per crop).

Annual income from irrigated cropping can be estimated by extrapolating from these data. Assuming a net gross margin of R784 per crop from four plots, growing an average of two crops per annum, the mean annual gross margin per farmer is R6 270 (from 0.4640 hectares), or R13 544/ha. This is slightly more than the mean of R12 062 per annum per hectare for the nine farmers in Dzindzi Irrigation Scheme reported by Van Averbeké and Khosa (2011: 158). Larger and generally successful producers, who are likely to grow the more lucrative crops, have the potential to earn considerably more. Assuming a positive gross margin of R1 500 per crop from six plots and two crops per annum, such a farmer could earn an annual income of R18 000 or R25 920/ha per annum, which is very similar to that earned by the most successful farmer in the Dzindzi scheme (R25 461/ha per annum). In comparison, a government old-age pension was worth R1 140 per month (or R13 680 per annum) in 2011, and the minimum wage for farm workers was R 1 375 per month or R16 250 per annum).

Tugela Ferry compared to other smallholder irrigation schemes

The key features of irrigation farming in the Tugela Ferry scheme are similar in many ways to those found in other low-cost, gravity-fed systems schemes: plot sizes are small and their distribution is fairly equitable; production systems are highly labour intensive; similar types of fresh produce crops are grown; common cash crops include green maize, tomatoes, cabbage, sweet potatoes and leafy green vegetables and production of specialised types of fresh produce for niche markets is absent or very limited (Van Averbeké and Khosa 2011). Tugela Ferry also has some distinctive features: the great majority of plot holders are women rather than men; the production of food crops for home consumption is limited and virtually all production is for sale; almost all crops use costly fertilisers and crop chemicals; the use of hired labour is more common; individual plots (or 'beds') are much smaller; an active, informal plot rental market makes it possible for many farmers to add to their plots; and the rental market means that most plots remain in cultivation most of the time.

Cropping here can be described as highly commoditised, in relation to both inputs (including labour) and outputs, with land only partially commoditised (in that plots cannot be sold) but nevertheless subject to a great many informal transactions between owners and others with 'temporary' use rights. Does such commoditisation result in high levels of social differentiation, as a class-analytic perspective might suggest?

Diversified rural livelihoods in Tugela Ferry

Farming is only one of several sources of livelihood for all farmers on the Tugela Ferry scheme, as is clear from a recent household survey, which allows for an initial analysis of social differentiation.³³ Farming on household land, at 33% of all income, is the single most important source. This is followed by state grants, wage employment and a few with small businesses.

Important gender differences in relation to sources of income are evident. Because most irrigation plot use is by women, farming is the most common source of income for them – even higher than child support grants. Permanent, temporary or casual jobs are proportionately more important for men than for women, but the total numbers of men and women holding such jobs is almost

equal. The most striking finding is that the total number of income sources for women is three times the number for men, mainly because of the large numbers of women engaged in farming and receiving grants.

Social differentiation and class in Tugela Ferry Irrigation Scheme

It would appear that class stratification of irrigation farmers in Tugela Ferry is limited, and that differences in household income are as likely to result from employment status as well as differential ownership of the means of agricultural production and farm income. Very few plot holders appear to be able to engage in accumulation from below under current conditions. Despite the high degree of commoditisation of production, class dynamics here, as elsewhere, are expressed most powerfully in the form of the “diversification of rural livelihoods” and the “fragmentation of classes of labour”, rather than through the emergence of clearly delineated categories of agricultural petty commodity producers or small-scale capitalist farmers. Why is this so?

There are three key constraints on accumulation from below in Tugela Ferry. The first is the nature of the property regime. Although the informal land market does enable the rental of unused plots, there appear to be strong social sanctions against engaging in this practice on a large scale, and the availability of additional plots is in any case limited by the high demand for them. Land rights are ‘socially embedded’, and many plots are ‘lent’ to family members or relatives (albeit in return for some material benefit). Very few farmers cultivate more than five or six plots. The largest plot user recorded in the household survey was cultivating fourteen plots, which amounts to only 1.624 hectares; one of the crop record sheets showed another farmer cultivating a total of twenty plots, or 2.320 hectares. Would-be accumulators are thus constrained by the amount of irrigated land that they can put into production.

A second constraint is the nature of the markets supplied, which is not product-differentiated to any degree: producers grow similar crop types of a generally similar quality, specialisation is absent, and no lucrative niche markets are supplied. Producers are highly dependent on itinerant traders and hawkers as buyers of their produce, and lack the means to engage in sophisticated marketing. Competition in the markets that are supplied is fierce and gluts are common. These factors limit the returns from crop production for most producers, including the larger growers.

A third constraint is structural. Msinga municipality, where the scheme is located, has many of the ‘classic’ features of an apartheid-era labour reserve: high population densities, shortages of arable land, poor rainfall, poor infrastructure, few local employment opportunities, and continuing dependence on migrant wages and remittances, and also more recently, social grants. There are few linkages between cropping and the local off-farm economy as most consumer goods are supplied by the corporations that dominate the national economy, because local residents, as suppliers of labour and as consumers, are ‘adversely incorporated’ into South Africa’s core economy (du Toit and Neves 2007). In these conditions, it is not surprising that there is a high level of demand for irrigation scheme plots to supplement other livelihood sources, and that local markets are somewhat undifferentiated. This suggests that accumulation from below will be highly constrained unless these kinds of broad, structural conditions can be altered, and a new growth path for the national economy can indeed be found.

Conclusion: Smallholder irrigation farming and ‘accumulation from below’

What analytical insights does the Tugela Ferry case, taken together with findings from similar contexts, offer to the wider debate on agrarian reform in South Africa and in the region? Some tentative conclusions may be suggested:

- Small-scale black farmers on irrigation schemes can achieve reasonable levels of crop productivity and can respond quickly to changing market conditions; the key issue is their access to resources, not their predisposition to farm.
- Access to soil and water of good quality, and in sufficient quantity, are key resources for successful small-scale farming in the dry and unreliable agro-ecological conditions found in many parts of the region, and agrarian reform must focus on both; expanding the supply of irrigation water has the potential to create many new opportunities for such farming.

- Some kinds of informal fresh produce markets are efficiently supplied by small-scale irrigation farmers, who could probably begin to supply more formal and specialised markets too – but this is likely to require targeted support and interventions.
- Property regimes are an important contextual variable, and a key feature is that they are often socially embedded. In places like Tugela Ferry, however, this can both facilitate accumulation from below but can also constrain it.
- Access to off-farm income is for many a pre-requisite for successful accumulation from below, and notions of promoting only ‘full-time’ farmers should be abandoned.
- Given propitious conditions, successful farmers identify themselves through the way they respond to these conditions but attempts to preselect ‘good farmers’ or entrepreneurs, as in so many colonial and post-colonial development programmes, is counter-productive.
- Locality within the wider agrarian structure remains a fundamental constraint on small-scale farmers in the former reserves, so an agrarian reform aimed at supporting accumulation from below must seek to radically alter that structure.

A new version of agricultural accumulation from above, but with ‘emerging’ black capitalists as the beneficiaries, might well be in the offing in South Africa. This is certainly the vision of powerful private sector interests and their allied think-tanks and has, at times, been adopted by the ANC government. The Strategic Plan for Agriculture of 2001 (Department of Agriculture (DoA) 2001), for example, emphasised efficiency and competitiveness, envisaged the de-racialisation of commercial farming through support and training of black entrants to the sector, as well as land reform and was silent on issues of structural change. Despite rhetoric to the contrary, government has yet to adopt a clear policy framework that is very different to this. Land reform policy continues to promote so-called strategic partnerships between agribusiness capital and beneficiaries, despite growing evidence of severe operational problems (Lahiff et al 2012). White commercial farmers and commodity associations are being asked by government to mentor black farmers and land reform beneficiaries, and many are willing to do so in the hope that the land question can be de-racialised

and thus de-politicised. Joint ventures with agribusiness and their black economic empowerment (BEE) partners are being promoted as the only solution to the revitalisation of many smallholder irrigation schemes, with plot-holders often reduced to being “equity labourers” (Tapela 2012). All these approaches face the problem that a very small number of ‘emerging black farmers’ are likely to be recruited.

An alternative route, aimed at supporting hundreds of thousands of smallholders and promoting accumulation from below, faces huge challenges. Redistributing land on a large scale is clearly insufficient, since to be productive, farming land also requires capital, equipment, labour, inputs, markets, and skills. Access to water, via affordable irrigation infrastructure, also will be key for many crops and farming systems. Ensuring that all of these resources can be made available at scale may be beyond the capacities of the state as it currently functions. Even if agrarian reform is broad-based in nature and offers farming opportunities to several hundred thousand beneficiaries, a class-analytic perspective suggests that only a minority of small-scale farmers is likely to succeed as small commodity producers or make a transition to capitalist farming. Other kinds of economic opportunities, in employment or non-agricultural petty commodity enterprises, are also required to address the crisis of reproduction faced by a large segment of the population. An agrarian reform of this kind relies on and, in turn, contributes to a broader social transformation which might not, however, be possible under capitalism in any of its current guises.

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Endnotes

- ¹ Comments made at DST/NRF workshop on land and agrarian reform, Cape Town, 28 Feb 2012.
- ² http://www.regoverningmarkets.org/en/southern_africa
- ³ Disclaimer: the views expressed here are those of the author and do not necessarily reflect the policies or perspectives of the Department.
- ⁴ An interesting South African example is the analysis by McCarthy (2008) on multipliers in the sugar industry. McCarthy's approach is to examine the historical development of farming communities in sugar-growing areas of KwaZulu-Natal and Mpumalanga.
- ⁵ The value of agricultural production in the ex-Bantustans is especially uncertain. Using StatsSA's 2005/06 *Income and Expenditure Survey*, expenditure-per-capita averages were estimated per decile for urban versus rural households and the finding is that food expenditure per household member is consistently less among rural households than urban ones. The gap is taken to be a reasonable proxy of the (imputed) value of agricultural production within the ex-Bantustans, whether or not it is marketed, not least because the vast majority of small-scale farmers are indeed located within the ex-Bantustans. Meanwhile, the expenditure on agricultural inputs was taken from the same survey. The robustness of these estimates will become clearer once StatsSA releases the data from the 2010/2011 *Income and Expenditure Survey*.
- ⁶ It suggests the same ambiguity about economic measurement that arises in discussion about gross domestic product. Is it not the case that much of the economic value added that contributes to gross domestic product relates to that which is undesirable (arms manufacture) or to the containment thereof (domestic security services)?
- ⁷ Modern markets will be used in the context of this study.
- ⁸ In 2007 one US dollar = seven rands and in 2002 one US dollar = eight rands.
- ⁹ Minutes of the Moletele CPA AGM held in January 2010.
- ¹⁰ Speech for the land handover celebration for the Moletele community claim delivered by the Minister for Agriculture and Land Affairs, Ms Lulama Xingwana, Limpopo, 1 July 2007.
- ¹¹ www.safe.co.za
- ¹² Interview with Mr Fanie Meyer, CGA representative in Hoedspruit, 4 October 2011.
- ¹³ Thanks are due to Bridget Kenny for sharing ideas on this topic.
- ¹⁴ http://www.massmart.co.za/corp_profile/faq.asp - accessed 12 March 2012.
- ¹⁵ These crops, along with green maize, constitute around 90% of total vegetable production (NAMC, 1999:26).
- ¹⁶ Information in this paragraph drawn from <http://www.catmanplus.com/whatis.html> - accessed 1 Nov 2011.
- ¹⁷ Info on Walmart from <http://en.wikipedia.org/wiki/Walmart> unless otherwise stated.
- ¹⁸ Find out more from John Boule jbouille@angus.org.za, project manager, Angus Breeders.
- ¹⁹ The Department of Rural Development and Land Reform's National Rural Youth Services Corps, <http://www.ruraldevelopment.gov.za/NARYSEC/NARYSEC.html>
- ²⁰ Mobile banking as e-commerce (electronic commerce) generally using the internet. M-PESA is an example. More than 80% of Kenyans use M-PESA.
- ²¹ Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved (see http://ifoam.org/growing_organic/definitions/doa/index.html).

- ²² I have provided fictitious names for all participants.
- ²³ http://www.jhbproperty.co.za/company_profile.html
- ²⁴ The members have been trained in organic methods and use various scented plant varieties to manage pest infestations.
- ²⁵ All names are fictitious to provide anonymity.
- ²⁶ Mma Tshepo Khumbane (MTK) award for “best practices in the management of natural resources” <http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=22170&tid=45330>
- ²⁷ Tepe is the local name for a variety of Amaranth.
- ²⁸ Passers-by often bring their own bags.
- ²⁹ An alternative to the third party organic certification process. For more information see http://www.ifoam.org/about_ifoam/standards/pgs.html.
- ³⁰ Peters (2004:305) notes for the broader African context that ‘proliferating tensions and struggles between generations and genders, or between groups labelled by region, ethnicity or religion, are intimately tied up with the dynamics of division and exclusion, alliance and inclusion that constitute class formation’.
- ³¹ Locally the scheme is known as Mthatheni, the place of the beds.
- ³² Gross margins were calculated by subtracting crop specific costs from gross returns, a negative gross margin indicating that a loss has been incurred. Income from the crop included an estimate of the cash value of crops consumed by the farmer’s family or given to others as gifts. Labour costs included the cash value of produce used to pay workers (usually for harvesting labour), but not the imputed cost of the farmer’s or family labour. The gross margins did not include a share of fixed or overhead costs, such as maintenance, repair or replacement of tools and equipment, due to inadequate data on such costs.
- ³³ A sample of 171 households with plots on the scheme was surveyed, constituting between 17–23% of the population who have plots on the scheme (depending on the total population, for which only rough estimates are available).



Progressive agrarian transformation has rhetorically encompassed a shift to small-scale agriculture in South Africa since at least 1994 when the Reconstruction and Development Programme (RDP) proposed reorienting agricultural support towards small-scale production. However, material support for this shift only really took off in 2009 when government and agribusinesses converged on a strategy to integrate small-scale growers into value chains – mainly in the form of contract farming.

Using original case study material, *Smallholders and Agro-Food Value Chains in South Africa* draws lessons from the value chains integration strategy and various innovative models developed to support it. Case studies range from agribusiness-sponsored sub-contracting projects to strategic partnership agreements on restitution farms and welfarist urban agricultural projects in the heart of Johannesburg.

The book reflects on who might benefit from the value chains integration strategy: Will it only serve a narrow, relative elite, of small-scale black farmers? Or can the strategy potentially widen the base of small-scale producers so that they become a significant force in South Africa's agricultural sector?



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