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POLICY BRIEF

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Learning from the decline of smallholder agricultural projects in the Kat River Valley, Eastern Cape, South Africa

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KEY POLICY MESSAGES

- Local level, collective small-scale farming projects in the Kat River Valley, like elsewhere, have proven difficult to sustain.
- Various factors from macro-level policies to local level social and political dynamics were found to hinder or block the success of such projects.
- Some of the most challenging factors relate to history and path dependency, prevailing neoliberal agricultural policies and discourses, narrow markets, internal conflicts, lack of local capacity and unclear and insecure land tenure.
- Addressing these challenges and barriers requires solutions from the national to local level that embrace a fundamental shift in thinking from a purely commercial farming focus to one that considers multifunctional landscapes and agro-ecological approaches that help to reduce input costs, diversify crops, target multiple markets and provide food for the table.
- Furthermore, working closely with individual farmers, and being aware of and catering for, the diversity of production interests and objectives amongst these farmers (especially gender differences) is key to success.

PROBLEM STATEMENT

Small-scale farming has been shown to be critical for its contribution to multiple outcomes, including:

- food security^{1,2} and socially just and equitable development^{21,10};
- the provision of economic benefits, through supporting the local economy, providing local employment and improved incomes, and driving broader economic growth^{2,3};
- assisting in livelihood diversification and increasing local resilience⁴; and lastly
- as a means towards a more ecologically benign production system¹⁰.

However, many externally supported small-scale agricultural projects in South Africa have been shown to collapse over time. Unpacking the reasons for this is crucial to revitalising agriculture and supporting local food production and food security under a changing climate and growing levels of poverty.

This policy brief considers two small-scale agricultural projects in the Kat River Valley, Eastern Cape, South Africa, and focusses on two key questions: 1) why were the projects not sustainable, and 2) what can be done to transform the situation and increase food security? Farmer and other key informant interviews and focus group discussions were held to understand local perspectives on the barriers faced by participants and the factors contributing to the demise of the projects. These were then further explored through a review of challenges and barriers identified in the literature.



THE CASE STUDIES

Case I: Hertzog Agricultural Co-operative (HACOP)

The Upper Kat River Valley was once called the breadbasket of the Eastern Cape, being one of South Africa's most productive citrus and tobacco areas⁵. In the 1970s the area became part of the Ciskei homeland. White farmers left, while black, former farm laborers remained on the land. It was at this time that the HACOP project began. Below is a time-line, provided by local farmers and community members, of the events that played out from the successful initiation to the eventual collapse of HACOP.

"The co-operative scheme has provided the first major productive employment in the valley in more than 15 years, which has led to self-actualisation, and a sense of pride and self-achievement"²²

Table 1: Timeline and description for the HACOP project

Date	Event	Comments
1994	HACOP formed by former farmworkers. Eighty-three, one hectare plots given to shareholders	<ul style="list-style-type: none"> Comprised of Hertzog, Phillipton and Fairbairn villages. Used abandoned farm land, implements and infrastructure. Support from an African Bank loan and a white farmer/foreman. Plots individually allocated, but land government owned. Plots leased to shareholders on a six-year basis (HACOP Lease Agreement). Rules included paying a joining fee, compulsory attendance at meetings, R70/month fee for electricity and use of the tractor. The project was initially highly successful with high agricultural productivity and extensive benefits to local people.
1997-1999	HACOP experiences a decline	Reasons cited: <ul style="list-style-type: none"> Departure of experienced foreman. Difficulty in obtaining markets for produce. Difficulty paying back the bank loan and paying for diesel. Lease ended.
2000-2001	HACOP stalls	<ul style="list-style-type: none"> The three villages separate and people start to leave. By 2000 Hertzog and Phillipton no longer involved. Negative bank balance.
2002-2005	HACOP experiences a resuscitation after a new chairperson elected	<ul style="list-style-type: none"> One-quarter hectare plots used to grow high yielding butternut to pay the project's expenses. The remaining $\frac{3}{4}$ of a hectare used for crops for home consumption. The success of this approach saw Amathole municipality donate another tractor and tools.
2005-2006	MASSIVE GMO maize government-initiated project introduced by Department of Agriculture and fails to work, and more people leave the project	<ul style="list-style-type: none"> Each village pooled 50 hectares where GMO maize would be grown. Contractor hired to plough the land and in first year government to provide seed and fertilizer. But, MASSIVE project fails to get off the ground. GMO cotton project is also unsuccessful. Reasons include: <ul style="list-style-type: none"> The people involved did not want the maize and failed to care for the fields properly. They did not appreciate losing their hectares where they were growing their own food. Majority of people left HACOP at this time.
2007- 2008	All previous members leave HACOP and it becomes inactive	<ul style="list-style-type: none"> The Masimanyane project drew many people away. The challenges (e.g. market scarcity) became too much and people left.
2009 - 2016	Two previous participants of HACOP start a fodder project with the same name. It is not open to other members, although family may participate.	<ul style="list-style-type: none"> Fodder (lucerne and yellow maize) is grown for the benefit of a few. The old tractor is repaired and put back into service. Supported by the Department of Agriculture, which provided a new pump. This project has caused some conflict with other villagers.

Case 2: Masimanyane

The Masimanyane project started much later than HACOP, in 2006, and included some participants who had left HACOP. The timeline below is also derived from local perspectives on the history of the project.

Table 2: Timeline and description for the Masimanyane project

Date	Event	Comments
2006	Masimanyane project formed and run by the Dept of Social Development with the goal of food security. A new chairperson of the project champions poverty alleviation through selling produce.	<ul style="list-style-type: none"> • Sixty people initially joined the project. • Provided with funds (R375 000), a pump, seeds and fertilizer. • Ten hectares set aside to grow vegetables. • Land divided up into smaller areas with groups working on each allotment. • A variety of produce sold to nearby villages in the informal market. • Participants only received payment in December (a rule of the Dept of Social Development) but could harvest produce throughout the year. • A profit of R23 000 was made in the first year.
Mid-2007	The chairperson and two other dynamic young leaders are offered full-time work and leave the project	<ul style="list-style-type: none"> • Due to a rule enforced by the Dept of Social Development, these young leaders were not permitted to participate in the project, in any capacity. • The project deteriorates considerably after this.
2016	Project ceases to operate	<ul style="list-style-type: none"> • Projects stops due to the many challenges faced (e.g. lack of a market, lack of manpower, theft, breakdown of machines, lack of participation from the youth, corruption).

Local (micro) level challenges and barriers identified from both Kat River Valley projects that contributed to their decline

Land tenure

Insecure land tenure was identified as one of the primary reasons behind HACOP's failure. Local residents and farmers currently do not have rights to the prime farming land adjacent to the Kat River, and, despite this land being viewed by them as community land, it remains under state control. Negotiations around this land issue have been occurring since 1997. A land claim application was lodged in 2001, and, though several follow up attempts have been made (there is a trail of correspondence), still nothing has come from the community request. This is creating tensions regarding who can use the land. Some members are not willing to farm until the tenure arrangements are clear, while the current two farmers are said to be asserting their claims to the land ("like when we wanted to plant tomatoes and they did not want us to do so because their things are not for the community"). The situation is complex, messy and unclear.

Finances

Financial challenges were numerous and included irregular payments, the low financial returns received, unreliable cash flow, the high cost of inputs as well as limited finances to buy inputs, the difficulty of repaying the loan to the African Bank, misuse of funds, and conflict over finances.

"Debts would be paid, like the Eskom bill because our irrigation system used electricity. Eskom's bill would be high and we would end up having nothing left. People started leaving because we were not getting anything out of the project, one would work while hungry, even on the day of harvest because most of the money went to HACOP to pay the debts. We ended up going in different directions."

Markets and Marketing

The narrow range of crops and the lack of capacity and competitiveness to secure reliable and beneficial markets meant that produce often lay rotting in the fields and farmers did not receive an adequate reward for their labor.

"There was no one who had the initiative to carry on finding a market, etc...I could see that they were good in producing. They had a technical know-how of how to grow, but once grown how would one sell it?"

Internal conflict

Another critical challenge centered on conflict; conflict within a project, between the various projects, between individuals, amongst the leadership and between the leaders of the new HACOP and the rest of the community. Regarding the latter there were some strong views. The attitude and actions of recent HACOP members were perceived as individualistic; they were said to have failed to inform the rest of the community of their intentions, and to be using the equipment and land of the 'old' HACOP without the broader community's agreement. This situation was said to be hampering new initiative, so that "everything had ground to a halt" and "things that were meant to be for the community end up not flourishing".

Maintenance of equipment

Difficulty in maintaining equipment, such as the tractor and pump, presented as yet another challenge. Participants become dependent on these technologies to farm, and yet such equipment breakdowns frequently. It was costly to repair, repair companies were unreliable and some essential tools were stolen. This disempowered the farmers.

"The last ditch was when the very last engine was stolen: that put a nail in the coffin on the project's death."
(referring to the Masimanyane project)

Dishonesty and theft

Related to the challenge of conflict, is the problem of theft, which has hampered both projects. Corruption, amongst funders and suppliers were mentioned. A number of respondents shared a story in which Masimanyane was encouraged by the Department of Social Development to purchase equipment from a particular supplier. Although this purchase used up most of their remaining funds (R75 000) they received little of the equipment. To this day, they are waiting for the Department of Social Development to fulfil their promise of following up with the police.

Capacity and skills

Lack of capacity and training, both in agricultural production and managing a communal project, were identified as challenges that prevented the success of the projects. Poor farm management, lack of record keeping and bookkeeping, poor financial management, limited general knowledge on farming and innovative techniques, weak marketing skills and illiteracy were highlighted.

"Remember they (farmers) were never introduced to managerial skills. There was just this amount of money given to them. There were no conflict resolution skills. For instance, a very large group was given money to work on their own, with no financial management skills. Behavioral patterns will always crop up in a larger group. For example, the issue of trustworthiness. In short if there is a project I feel that if a lot of upscaling is done in respect to all these aspects, then it will be fine."

Limited crop choice

Initially one crop was primarily promoted, namely cabbages for the commercial market. When markets could not be found, these cabbages were left in the field and it was mentioned that "the children used them for footballs". A few years later, butternuts were introduced, which helped revitalize the HACOP project, but this was followed by a focus on GMO maize and cotton as purely cash crops, both of which were rejected by the community. The remaining members of HACOP are growing fodder that at least has a local market, as livestock production is still a way of life in the village. This lack of consideration of local preferences and needs regarding crops was seen a contributing factor to the demise of the project.

The GM maize and cotton initiatives for HACOP were unsuccessful. As an interviewee explained: "These mealies did not grow so well. The people did not go to clean it, water it because they didn't want this thing. There was no care. The project did not succeed." People also didn't appreciate losing their hectares for which they were growing their own food. After the MASSIVE maize project, Government funded a GMO cotton project, which was also unsuccessful: "one can't eat cotton".

Others

Additional challenges mentioned included: poor leadership; lack of access to water; waning enthusiasm with time; lack of interest from the youth; uncoordinated support; divergent interests among people who make up a co-op; and lastly the funder's and project rules, which didn't reflect local people's needs and preferences (e.g. only being paid in December, growing GM cotton).

Macro-level factors negatively influencing local smallholder farming in South Africa

Many of the issues and challenges identified at the local level (above) have emerged from or have been influenced by the factors described below, which were identified from the literature. Certainly, the situation in the Kat River Valley is not unique, but rather typical of what has been observed in other parts of the country.

History and changes in agricultural practices

South Africa's apartheid history continues to be a driver of agricultural practices today. Apartheid was institutionalized as a means to erode local self-sufficiency and provide a cheap source of labor for the mines. This created huge farming disparities, based on racial lines. Land dispossession, forced removals and the Bantustan policy meant that by 1994, agriculture in South Africa was sharply divided. On the one hand, there was technologically advanced and capital-intensive forms of large-scale agriculture in formerly white areas, making up 84.8% of South Africa's agricultural land⁸, while on the remaining land, marginalized, smallholder subsistence farming was carried out by an estimated 2 million black households concentrated in the former homelands⁷.

The structure of any agricultural system is not determined by a neutral process, but rather reflects a dominant political, economic and social narrative. South Africa's has been shaped by colonization, apartheid and democracy, it is influenced by globalization and benefits a particular group of stakeholders⁶.

Apartheid policies had disempowering consequences for affected people, negatively affecting their “self-determination, confidence, and self-sufficiency” and marginalizing the homelands where they lived⁴. Farming has thus greatly diminished and become a marginalized activity in the former homelands, partly due to the monetization of the rural economy⁷. Large-scale commercial agriculture and product distribution through supermarkets has become the main source of food for rural dwellers⁷. Consequently, agriculture has become increasingly disconnected from the local, rural economy⁸, while a highly concentrated core economy has developed, dominated by a small number of powerful corporations²³.

Agricultural policies

The ANC government followed a macro-economic growth path, underpinned by neoliberal, market deregulation and trade liberalization policies^{7,9}. This guided the type of agricultural policies implemented, which have had a clear focus on supporting large-scale commercial agriculture and increasing economies of scale to the neglect of small-scale farming approaches^{10,7}. As Cousins⁷ state, only commercial agriculture is viewed as real agriculture. This neo-liberal/ commercial approach has been used to rejuvenate agriculture in previous homeland areas where there has been a push for subsistence farmers to become commercial⁷. In one model, partnerships are encouraged between black land-owning communities and agribusiness partners through a contract farming arrangement.

“All too often, large-scale land investments, genetic improvements and market integration create conditions from which only a few benefit, while millions are pushed off the land. Poverty is manufactured at an industrial scale and distributional patterns in society as a whole become ever more exclusionary and unequal.”⁹

The agribusiness partners manage the land on the communities' behalf, benefits are shared and the hope is that communal landowners will turn commercial through the mentorship^{10,12}. Hall & Cousins⁹ critique this model of contract farming by arguing that “in a growing proportion of cases, black people neither get rights to land, nor control how it is used, but rather serve as shareholders in corporate enterprises”. Agribusiness and corporate power have thus increasingly influenced the land reform agenda^{10,32}. Numerous authors address this issue of land reform, stating that government policy has not adequately addressed the lack of land tenure in rural, previously disadvantaged communities, nor has it facilitated the development of smallholder farmers^{10,11,7}. Agricultural policies thus fail to address the challenges faced by smallholders¹¹; they receive limited extension support¹⁰, face barriers to entry into markets^{9,7}, and have, consequently, become increasingly marginalized and ignored^{11,7}. The Kat River Valley projects have been affected by these policies and thinking.

Markets and the supermarket effect

Market access either determines smallholder success or not, and remains a significant barrier to successful communal and smallholder farming, as highlighted in our cases³. Such farmers face difficulties in competing in well-developed markets² for the following reasons.

- Agri-food value chains favor commercial farmers¹³.
- Supermarkets generally operate on centralized procurement processes with stringent demands⁷.
- Smallholders are unable to provide the volume, diversity and reliability required or meet the phytosanitary requirements^{6,14}.
- There is a lack of accessible markets².
- Marketing skills and knowledge are limited².
- Poor roads and storage facilities result in high transaction costs¹⁵.

The rural economy consequently suffers, with reduced potential for local economic opportunity¹⁶.

“Space for smaller players and alternative paradigms and visions is exceptionally limited and becoming more so. The more concentrated a system becomes, the less likely it is to allow in new players, instead becoming increasingly regulated and catering to the needs of the 'mega' players. These corporate actors have only one mandate and that is to return a profit to shareholders. This has implications for food security, social equity and environmental sustainability in South Africa”.⁶

Inappropriate extension/training support, financial limitations and high agricultural costs

There is a lack of appropriate extension and training support for smallholder farmers. Training programs are often designed for commercial production and monocultures, or are offered by companies promoting their products. In addition, small-holder farmers have limited access to finance. Difficulty in accessing credit facilities via the formal routes results from a lack of collateral and the high-risk environment of smallholder farmers. At a local level, lenders generally charge extortionate interest rates^{17,18}. This situation is exacerbated by rising input costs. These are very real challenges to farming, particularly amongst smallholders who lack access to capital. For example, there was a 200% rise in fertilizer costs between 2006 and 2008, seed has on average increased by 18% over the last decade and operational costs have also increased⁶.

“There appears to be very few support programs that take seriously the specific production systems and marketing opportunities of market-oriented smallholders in loose value chains”.⁷

South African social and political context

The constraining social and political context many rural South Africans currently face is an added challenge to engaging in productive small-scale farming. All of the factors mentioned in Figure 1 contribute to making small-scale and subsistence farming difficult. Farming success cannot be dissociated from other social and development needs.

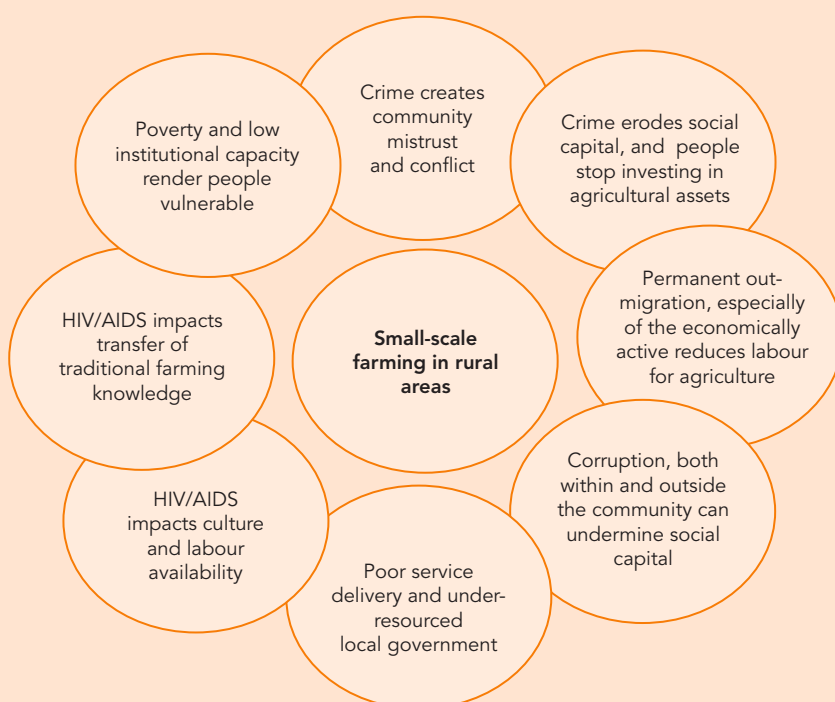


Figure 1: Social and political contextual factors affecting small-sale agriculture. Based on Shackleton & Luckert⁴

WHAT NEXT?

The factors influencing the sustainability of local farming initiatives are complex and interconnected and therefore require multiple solutions. The range of barriers and challenges that emerged at a community level mirror those identified in the literature, and cut across scales. All need attention if we are to revitalise small-scale farming in many parts of the country. Below we outline three potential areas that could contribute to this goal.

New ways of thinking about farming

The commercial, agro-industrial, large-scale model of farming that has been pushed globally and nationally is underpinned by the idea that human activities are separate from nature. This idea, expressed in the concept of social-ecological dualism, drives western systems of thought and action and has contributed to the destruction of traditional ways of farming, as well as the health of local social-ecological systems. New discourses and narratives for smallholder farming are thus needed that don't force farmers into a box, that are affordable and that build on the understanding that social and ecological systems are connected. Revising policy and institutional frameworks to better suit smallholder farmers is critical if they are to compete locally and nationally². To achieve this, policy makers need an in-depth understanding of the realities and challenges facing smallholder farmers¹⁹, and need to look towards different ways of promoting and supporting a diverse small-scale agricultural sector.

Alternative, agro-ecologically based or sustainable agricultural approaches (e.g. agro-ecology, conservation agriculture, climate smart agriculture, agro-forestry, permaculture, etc.), with their emphasis on the local scale, are concerned with social justice and maintaining the social fabric of the farming community²⁴. In addition, these approaches mimic ecological processes such as planting biodiverse systems, increasing predators, improving the soil and managing water runoff, absorption and evaporation²⁵. This all helps to support self-sufficiency and reduce costs, as the biophysical foundation of the farming system is protected^{26,27}. Less intensive inputs result in fewer financial demands on smallholder farmers²⁵.

There is evidence that smallholder farmers, practicing alternative agricultural systems can be as productive, or more so, than large-scale industrial farmers. These systems are also two to four times more energy efficient and receive a higher return on level of input^{26,27}. Increases in production of 50-100% in many alternative farming methods have been documented²⁵.

The prize winning Amanzi for food network (<http://amanziforfood.co.za/about/>), funded by the Water Research Commission and implemented through the Environmental Learning Research Centre at Rhodes University, promotes sustainable agricultural methods (such as rainwater harvesting, mulching, composting, limiting inputs, practicing diverse intercropping, and others) through training workshops and learning networks. Two local, resource poor farmers in the Eastern Cape have benefited from this program. These farmers are now successfully practicing agro-ecology and grow a surplus of food in their gardens, which they sell.

Improved land tenure

A critical hurdle that urgently needs to be overcome is the unclear and insecure land tenure in many rural areas, as this is hampering agricultural production and the motivation of farmers²¹. The Kat River Valley has a complex and messy tenure system (with mixed communal and freehold), to which was added the lease agreements given to shareholders in the HACOP cooperative. When this cooperative ceased to operate in the way initially conceived, tensions regarding land rights arose. The majority of community members view the land as communal and, thus, belonging to the community as a whole and not to the remaining shareholders. A lack of response to requests for assistance by the Department of Rural Development and Land Reform has stalled any progress with cultivation of this kind. The Legal Resource Centre mentioned that poor communication and accountability by the Department in the Eastern Cape was having serious consequences for land reform and agriculture.

New markets and more appropriate and targeted extension and training

Supporting market entry for smallholder farmers was a common recommendation in the literature^{16,20}. Securing diverse local and specialised markets would help ensure that small-scale agriculture is financially viable and able to contribute towards livelihood and food

"There is a lot of support out there but it is difficult to access". Comment by an aspiring smallholder farmer.

security without replicating the large-scale farming model.

Examples of potential local markets include government procurement programs (school feeding schemes and hospitals), the local tourism industry, and specialized food and farmers markets, where farmers could cooperate in their marketing efforts. However, markets are not everything and food for home consumption or domestic livestock and chickens may be the specific objective of some farmers, especially women.

The provision of training programs and extension services that suit smallholder farmers' highly diverse conditions and needs, and where one size does not fit all⁷, is another area of significant focus in the literature. Various government departments, programs and NGOs offer agricultural support in the form of funding, training, provision of resources, accessing networks, and creating markets, although farmers often know little about how to access these services. Furthermore, such support arrangements need to be tailored to local contexts and preferences, and so require the participation of farmers. Greater participation will help to prevent failures such as the Siyakhula-Massive maize and cotton projects introduced to HACOP by the Eastern Cape Department of Agriculture. Smallholder farmers also need training in business development²⁰ and, as mentioned by local participants, important areas include financial management, conflict resolution, food growing, effective farm management and sustainable agriculture. Opportunities for farmers to learn from each other through social learning mechanisms would also be beneficial.

CONCLUSION

Poverty and food insecurity is increasing in South Africa. Bank and Hart²⁹ argue that this could be pushed back if policies are put in place that focus on food security and creating viable pathways to prosperity for the rural poor. However, for this to happen requires land reform and greater clarity in terms of local, often informal, land rights (as in our HACOP case), as well as a policy and institutional context that better promotes alternative, sustainable agricultural models that are rooted in local social-ecological realities, and that support self-sufficiency, individual choices and empowerment. Without these fundamental transformations, successful small-sale farming will remain elusive. At a more local level, greater innovation and support is needed related to the diversification of production systems, availability of water, soil and water conservation, choice of crops, access to micro-credit and opportunities for tapping into local and niche markets. Moreover, the specific objectives of different farmers need attention – not all small-scale farmers have the same goals in mind. While, there is no doubt that the interest to farm is there amongst a significant number of rural residents, it also needs to be respected that not everyone wants to be a farmer or to make farming a sole livelihood activity. Thus, the types of model used to bring projects to communities is important, and cooperatives may not always be the answer. Several practical ideas to revitalise local agriculture and facilitate the move from food insecurity to food security are discussed in Number 12 of the Department of Environmental Science's (Rhodes University) policy brief series²⁸.

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REFERENCES

- ¹ du Toit, A. & Loate, L. (date unknown). Food and nutritional security in South Africa: An agro-food systems perspective. FACT SHEET. South Africa Network on Inequality (SANI) at EJN. PLAAS (Research Report 53), UWC, Belville.
- ² Jari, B. & Fraser, G.C. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds). Wageningen Academic Publishers, Netherlands.
- ³ van Tilburg et al. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds). Wageningen Academic Publishers, Netherlands.
- ⁴ Shackleton, S. & Luckert, M. 2015. Changing livelihoods and landscapes in the rural Eastern Cape, South Africa: Past influences and future trajectories. *Land*, 4: 1060-1089.
- ⁵ Nel, E. & Hill, T. 1996. Community-based Rural Development in Hertzog, South Africa. *Geography*, 81 (3): 273-275.
- ⁶ Swanepoel, S. 2014. A constricted agricultural system: Cartels, collusion and corporate farming. PLAAS (Research Report 53), UWC, Belville.
- ⁷ Okunlola, A., Ngubane, M., Cousins, B. & du Toit, A. 2016. Small-scale black farmers and private sector support programs in South Africa: A national scan. PLAAS (Research Report 53), UWC, Belville
- ⁸ Hall, R & Osorio, M. 2014. Agricultural investment, gender and land in Africa: Towards inclusive equitable and socially responsible investment. Conference report. PLAAS (Research Report 53), UWC, Belville.
- ⁹ Hall, R & Cousins, B. 2015. Commercial farming and agribusiness in South Africa and their changing roles in Africa's agro-food system. PLAAS (BICAS Conference) UWC, Belville.
- ¹⁰ Greenberg, S. 2013. The disjunctures of land and agricultural reform in South Africa: Implications for the agri-food system. PLAAS (Working Paper 26), UWC, Bellville.
- ¹¹ Kepe, T. & Tessaro, D. 2014. Trading-off: Rural food security and land rights in South Africa. *Land Use Policy*, 36: 267– 274.
- ¹² Davis, N. 2013. Aspects of the citrus value chain explored in the context of Moletele restitution initiatives, Hoedspruit. In Greenberg, S. (Ed). *Smallholders and agro-food value chains in South Africa: Emerging practices, emerging challenges*. PLAAS, UWC, Belville.
- ¹³ Nkomo, M. 2013. Experiences and insights on smallholder farmer value chain integration. In Greenberg, S. (Ed). *Smallholders and agro-food value chains in South Africa: Emerging practices, emerging challenges*. PLAAS, UWC, Belville.
- ¹⁴ Cousins, B & Borrás, J. 2015. The political economy of global and regional agro-food system change. PLAAS (BICAS Conference), UWC, Belville.
- ¹⁵ Jari, B & Fraser, G.C.G. 2009. An analysis of institutional and technical factors influencing agricultural marketing amongst smallholder farmers in the Kat River Valley, Eastern Cape Province, South Africa. *African Journal of Agricultural Research*, Vol. 4 (11): 1129-1137.
- ¹⁶ Stroebel & van Schalkwyk. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds.) Wageningen Academic Publishers, Netherlands.
- ¹⁷ Groenewald & Jordan. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds). Wageningen Academic Publishers, Netherlands.
- ¹⁸ Obi & Pote. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds). Wageningen Academic Publishers, Netherlands.
- ¹⁹ Louw, A. 2013. Sustainable policy support for smallholder agriculture in South Africa: key issues and options for consideration. In Greenberg, S. (Ed). *Smallholders and agro-food value chains in South Africa: Emerging*

practices, emerging challenges. PLAAS, UWC, Belville.

- ²⁰ van Tilburg & van Schalkwyk. 2012. In *Unlocking markets to smallholders: Lessons from South Africa*. Van Schalkwyk, H.D., Groenewald, J.A., Fraser, G.C.G., Obi, A., & van Tilburg, A. (Eds). Wageningen Academic Publishers, Netherlands.
- ²¹ Nel, E & Davies, J. 1999. Farming against the odds: An examination of the challenges facing farming and rural development in the Eastern Cape province of South Africa. *Applied Geography*, 19: 253–274.
- ²² Nel, E., Hill, T. & Binns, T. et al. 1997. *The Geographical Journal*, 163 (1): 57-64.
- ²³ Philip, K. 2010. Inequality and economic marginalisation: How the structure of the economy impacts on opportunities on the margin. *Law, Democracy and Development*, 14.
- ²⁴ Rigby, D & Caceres, D. 2001. Organic farming and the sustainability of agricultural systems. *Agricultural Systems*, 68: 21-40.
- ²⁵ Altieri, M.A. 2002. Agroecology: The science of natural resource management for poor farmers in marginal environments. *Agriculture, Ecosystems and Environment*, 93: 1–24.
- ²⁶ Perfecto, I & Vandermeera, J. 2010. The agro-ecological matrix as alternative to the land-sparing /agriculture intensification model. *PNAS*, 107(13): 5786-5791.
- ²⁷ Chappell, M.J. & LaValle, L.A. 2011. Food security and biodiversity: Can we have both? An agro-ecological analysis. *Agriculture and Human Values*, 28(1): 3-26.
- ²⁸ Shackleton, C.M., Hamer, N., Swallow, B. & Ncube, K. Addressing local level food insecurity amongst smallholder communities in transition. Policy Brief No 12, Dept of Environmental Science, Rhodes University, Grahamstown.
- ²⁹ Bank, L.J. & Hart, T. 2017. How land reform and rural development can help reduce poverty in South Africa. *The Conversation*.