© Council for the Development, Vol. XXXVI, No.1, 2011, pp. 49–62 © Council for the Development of Social Science Research in Africa, 2011 (ISSN 0850-3907)

Can It be Achieved? Partnering Towards Improving Livelihoods in the Ganspan Settlement, Norther n Cape Province, South Africa

D. Norris,¹ E.C. Van Zyl,² W.T. Hashe,³ M.S. Mafuma,⁴
M. P. Senyolo,⁵ S. P. Mngomezulu,⁶ D. Enserink,⁷
J.W. Ngambi⁸ & C.A. Mbajiorgu⁹

Abstract

The Agricultural Research for Development (ARD) approach was used to determine the livelihood strategies of the Ganspan community; the current socio-economic dynamics and how they impact on livelihoods; the vision for the future; and to develop an initial road map for achieving better livelihoods. Eighty out of 210 households were sampled to determine the livelihood typology of the settlement. Participatory rural appraisal tools were used to explore stakeholders' perceptions of the current problems/opportunities and the possible solutions. Only 3 per cent of households are solely dependent on agriculture whereas the

- 2. De Eiken, PO Box 133,Graafwater, Western Cape. South Africa. Email: vanzyl@yahoo.com
- 3. University of Wageningen, Wageningen, The Netherlands. Email: wthashe@yahoo.com
- 4. University of Wageningen, Wageningen, The Netherlands. Email: mazwi.mafuma@gmail.com
- 5. University of Wageningen, Wageningen, The Netherlands. Email: senyolomp@yahoo.com
- 6. University of Wageningen, Wageningen, The Netherlands. Email: mgmzl@yahoo.com
- 7. International Centre for Development Oriented Research in Agriculture (ICRA), Wageningen, The Netherlands. Email: driek.enserink@wur.nl
- 8. Department of Animal Production, University of Limpopo, Sovenga, South Africa. Email: jones.ngambi@ul.ac.za
- 9. Department of Animal Production, University of Limpopo, Sovenga, South Africa. Email: mbajica@unisa.ac.za

^{1.} Department of Animal Production, University of Limpopo, Sovenga, South Africa. Email: norrisd@ul.ac.za

majority (76%) derive livelihood from non-agricultural activities. The rest of the households derive their livelihoods from both agricultural and non-agricultural activities. Agriculture has a modest contribution to household income compared to social grants and employment. Generally, the community is economically depressed. Developmental strategies were identified, screened and prioritised. Collaboration and joint action by various stakeholders is essential for the sustainable development of the settlement. The establishment of an innovation platform with representatives of all relevant stakeholders is strongly recommended in order to jointly implement integrated and inter-institutional development action plans.

Résumé

L'approche de recherche-développement agricole (RDA) a été utilisée pour déterminer les stratégies de survie de la communauté Ganspan, la dynamique socioéconomique actuelle et comment elle influe sur les moyens d'existence, la vision du futur, et élaborer une feuille de route initiale pour obtenir de meilleurs moyens d'existence. Sur 210 ménages, quatre-vingts ont été choisis pour déterminer la typologie des moyens d'existence de la communauté. Des outils d'évaluation rurale participative ont été utilisés pour explorer la perception par les parties prenantes des problèmes/opportunités actuels et les solutions possibles. Seuls 3 pour cent des ménages dépendent uniquement de l'agriculture, tandis que la majorité (76%) tire sa subsistance d'activités non-agricoles. Les ménages restants vivent d'activités agricoles et non-agricoles. La contribution de l'agriculture au revenu des ménages est modeste, comparée aux subventions sociales et à l'emploi social. En général, la communauté est économiquement défavorisée. Des stratégies de développement ont été identifiées, passées au crible et les priorités établies. La collaboration et l'action conjointe entre les diverses parties prenantes sont essentielles pour le développement durable de la communauté. La mise en place d'une plate-forme d'innovation avec des représentants des parties prenantes concernées est fortement recommandée, pour la mise en œuvre conjointe de plans d'action pour le développement intégré et interinstitutions.

Introduction

South African agriculture is characterised by a dualistic structure (commercial and subsistence sectors). The commercial sector is highly developed, consisting of about 50,000 mainly white commercial farmers occupying 86 per cent of agricultural land while the remaining 14 per cent is occupied by mainly black small-scale and subsistence farmers (Ortmann and Machethe 2003). The imbalance in the distribution of land has the potential to cause social uprisings within the black subsistence farming community. The

government recognises these imbalances and has therefore put in place policies intended to transfer 30 per cent of agricultural land to the disadvantaged communities by 2014. The government's land redistribution programme aims to provide the majority of South Africans with access to land for residential and productive use in order to improve their livelihoods, with particular emphasis on the poor, labour tenants, farm workers, women and emergent farmers (Ortmann and Machethe 2003). It should be noted that insufficient security of land tenure is considered to be largely responsible for lack of agricultural development in communal lands.

Though South Africa has a productive agricultural sector, largely due to extensive commercial farming which has enabled the country to be self-sufficient in food production, an estimated 14 million households are vulnerable to food insecurity (Machethe 2004) and an estimated 2.2 million households are food insecure (Department of Agriculture 2006). An estimated 3 million households residing primarily in former homelands and communal areas engage in subsistence farming (Department of Agriculture 2001) and occupy only 14 per cent of the agricultural land. Eastwood *et al.* (2006) suggest that access to land, particularly in rural areas, has the potential to result in improved and stable access to productive land in order to farm for subsistence and income has been a policy objective of the South African government.

The government has devised a new strategic plan for South African agriculture and this plan consists of three core strategies:

- 1. Enhance equitable access and participation in the agricultural sector;
- 2. Improve competitiveness; and
- 3. Ensure sustainable resource management.

The government recognises the need to integrate emerging black farmers into mainstream agriculture and has launched initiatives to achieve this goal (Vink and Kirsten 2003), including Agricultural Broad-based Black Economic Empowerment (AgriBEE) policies. However, most of these government initiatives have not yet made a significant and positive impact on the livelihoods of these target farmers. One of the reasons cited for this stagnation in improvement of livelihoods is the fact that most education staff and service providers in research and development often lack insight into complex livelihood systems and the motivations of the target populations (ICRA 2008). Poor social organisation of target populations has limited their inclusion in policy making and design of interventions. Weak linkages with the Land Bank, National and Provincial Departments of Agriculture (NDA and PDAs) have hampered the creation of a holistic support service.

One such community of emerging farmers targeted for assistance by the government (through the Northern Cape Department of Agriculture and Land Reform) is the Ganspan Settlement community. The settlement was initially formed as a habitat for disabled and poor whites who were provided with free basic services including production inputs for farming. In the early post-apartheid period, the services were withdrawn, resulting in most of the white inhabitants leaving the area while many black families moved in. The settlement is currently characterised by high unemployment and poverty levels. The Northern Cape Department of Agriculture and Land Reform recognises the poverty experienced by the Ganspan community and is seeking ways of establishing a viable developmental structure for the settlement.

Based on this, a study was conducted with a view to producing the following outputs:

- Livelihood strategies of the people living in the settlement;
- Current socio-economic dynamics occurring in the settlement;
- Determination of what should be the main focus of development efforts in the settlement;
- Vision (better future') of the future 'agricultural' development of the settlement;
- Initial road map to get from the 'current' to the identified 'better situation' jointly determined by stakeholders.

Methodology

Study Area

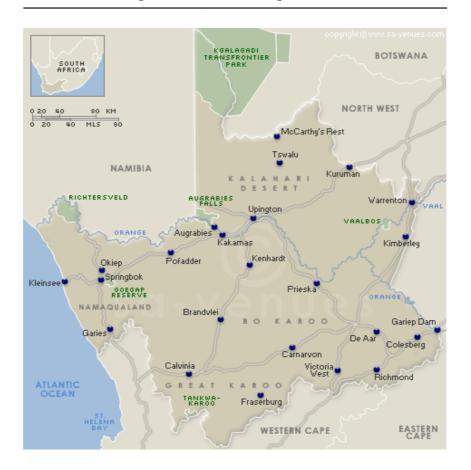
52

Geographic Location

Ganspan Settlement is situated in the Phokwane Municipal area which is part of the Vaalharts region of the Northern Cape Province. The settlement is about 35 km from Warrenton.

Climate

Temperatures range from 9.9°C to 32.2°C in summer and between -0.6°C to 19.2°C in winter. Night frosts occur during the months of June and July though daily temperatures can rise to 38°C during these months. The first occurrence of frost can be as early as mid-April and some frosts sometimes occur around mid-September. The average rainfall for this area is estimated at 327mm per annum, with most rain falling between October and April (Venter 2007).



Map of the Northern Cape Province

Source: www.sa-venues.com, 2008.

Soil Type

The dominant soil types are Plooysburg and Kimberley soil formations (Venter 2007). Soils in the area have low clay content which makes them vulnerable to wind erosion. About 88 per cent of the area is prone to wind erosion and a further 11 per cent is prone to both water and wind erosion. The rest of the land (1%) is prone to water erosion. Hard carbonate banks underlie most of the area and this restricts plant root penetration (Badenhorst 2001). A large percentage of the cultivated land (70%) has a mean soil depth of less than 1m.

Agricultural Activities

The total area of the settlement is 792ha, of which 194ha is irrigated (made up of 210 plots of 0.6ha each in the residential area, plus 68ha outside the residential area) while there is 425ha of grazing land. The cropland under rain-fed irrigation has an estimated area of 44ha (Badenhorst 2001). The rest of the area is community land (church, school, business, cemetery, etc.). Crop production constitutes the dominant form of land use. The main crops are wheat, lucerne, tomatoes, spinach, watermelons, cabbages, groundnuts, pumpkin, and recently, olives. Livestock production forms a small part of agricultural activities, with the main species in the area being cattle, goats and sheep.

Methods

An Agricultural Research for Development (ARD) approach (ICRA 2008) was used in this study. The approach focuses on people and not only on technological outputs because solutions to problems and sustainable benefits do not arise only from technological ingenuity but also from social, economic and political reforms. The approach recognises that development is a complex process of change and that it cannot be addressed by following rigid, top-down or reductionist processes. The approach uses inter-disciplinary and inter-institutional participatory methods to integrate and analyse the interest or perspectives of different stakeholders to address complex problems, challenges and/or opportunities. The ARD approach consists of two integrated cycles: an 'action cycle' and a 'learning cycle' (Figure 1).

The action cycle consists of three stages:

- (i) Forming partnerships with other organisations or individuals who share a common 'development challenge' - a complex development problem or opportunity;
- (ii) Achieving a common understanding of this challenge synthesising the perspectives of different stakeholders, understanding the wider context of the challenge, defining what changes these stakeholders want to see in the 'system';
- (iii) Screening and evaluating the different options or activities carried out to improve technology, service delivery to rural people, and policy and institutional changes that further enable innovation and the improvement of rural livelihoods.

54

4- Norris.pmd

54

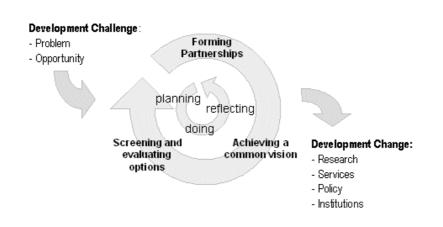


Figure 1: The ARD Approach

The learning cycle also consists of three stages:

- (i) Planning where a team representing the main stakeholders or partners collectively decides what to do and how to go about it;
- (ii) Doing where the team and/or partner institutes collectively or individually implement the agreed activities; and
- (iii) Reflecting where the team collectively evaluates what it has done, how effective this has been, and how to improve effectiveness in the future.

These are cycles of iterative stages, rather than a linear process, because all development practitioners are already involved in these processes, and because the different stages are not clearly separated. At any stage, it may be necessary to form new partnerships as options are evaluated and the understanding of the partners increases. Similarly, planning, doing and reflecting are always done simultaneously, even if one of these activities might be more prominent at any given time.

The research process consisted of a reconnaissance survey to increase the team's understanding of the area. Primary data collection was done through both formal and informal techniques. An initial typology was developed by the team and key informants. Three different classes of households were initially identified, based on the criterion of income source (farm income, combined income and non-farm income). Three respondents were selected as representatives for each class to verify the livelihood typology. Thereafter, a random sample of 80 out of 210 households was sampled and visited by the team for semi-structured interviews, and the households were classified according to the selected criterion. Descriptive statistics was used to analyse the data. Participatory rural appraisal tools such as key informant interviews and focus groups were conducted to explore stakeholders' perceptions of the current situation and the possible solutions. Different development strategies suggested by various stakeholders were screened and prioritised according to the developed criteria.

Key Findings and Discussion

Population Demographics

56

A large proportion (55%) of the community is made up of people more than 50 years old.. Children between the ages of 1 and 14 also form a significant proportion of the community (25%). Twelve per cent of the community is young adults between the ages of 18 and 28. Most of the active adult population has left the settlement due to lack of employment opportunities. The majority of people in the settlement are females (60%). The literacy level in the settlement is low – over 65 per cent of the population has no matric (high school) qualifications.

Current Socio-economic Dynamics

Households differ in their access to resources. They have different preferences, objectives and expectations, and hence they engage in different activities, both agricultural and non-agricultural. In other words, they have different livelihood strategies. This also means that they differ in the way they perceive and react to problems and will thus react differently to any research product or development proposal. Different recommendations (new technologies, new policies, new credit services, etc.) therefore need to be targeted to the different household types. Since households differ from each other, the ideal situation would be to take into consideration the relationship of each individual household to the existing problem(s), with the eventual aim of developing a specific recommendation or development plan for each household. However, this is tedious and impractical and the solution is to group households into a manageable number of classes.

According to Chambers and Conway (1992), a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. Furthermore, a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets, without undermining the natural resource base. Past approaches to rural development have paid inadequate attention to the complexity of rural livelihoods and the multiple dimensions of poverty (Carney 1998). Paying attention to the livelihood strategies of rural

communities enables sustainable development since development issues are considered with a holistic and multi-sectoral outlook. Furthermore, it becomes possible to know the vulnerability of households to various types of external shocks as these may have a significant bearing on poverty.

Three classes of households were identified in Ganspan: those that derive a living only from agricultural activities; those that derive a living from a combination of agriculture and non-agricultural activities, and those that depend entirely on off-farm activities. Only a small percentage of households (3%) earn a living from agriculture whereas the majority (76%) earn their living from off-farm activities. The combined income class (21%) was further sub-divided into sub-classes: a group that derives its income from agriculture and employment. This was done to determine the contribution of each sub-class to household income. Of the three income sources, agriculture contributes least to household income.

The off-farm income class was further sub-divided into three sub-groups: income from full employment, income from social grants and employment, and income from social grants alone. A small percentage of households (25%) in this class derives its livelihood from full employment whereas a large percentage (46%) depends fully on social grants, a pointer to the low standard of living in the settlement. Twenty-nine per cent derives its income from social grants and employment. Ganspan households have access to only 0.6ha of irrigated land and this small size could be one reason why agriculture does not contribute significantly to household income. The lack of land entitlement, lack of access to finance and inefficient machinery were among other factors mentioned as impeding improved livelihoods.

The small size of land can be tied to the broad problem of inadequate land available to historically disadvantaged communities. Apartheid government policy from the late 19th century onwards restricted access to land for black people. The main aim of this strategy was to provide a supply of cheap labour, especially for the expanding mining sector as well as the white commercial farming sector (Levin 1996). The Native Lands Act, passed in 1913, permitted black people to establish new farming enterprises only in the Native Reserves that comprised 8 per cent of the country's total area. It also prohibited black people not only from buying land from whites but also from entering into sharecropping arrangements (Adams *et al.* 2000). The post-apartheid government's White Paper on land policy (DLA 1997) aimed to tackle these issues by introducing a land reform programme that would develop new systems of land holding, land rights and forms of ownership. The land reform programme has three elements: land tenure reform, land restitution and land redistribution. A lot of criticism has been leveled against the

programme because land ownership remains grievously skewed in favour of white farmers (Moyo 2004) and the programme has failed to reduce poverty levels among the rural poor (Bradstock 2006). The programme is also criticised for being too slow and likely to fail to reach the target of transferring 30 per cent of the land to previously disadvantaged farmers.

Stakeholder Analysis

58

Stakeholders that played a significant role and potential stakeholders who are currently not involved in Ganspan were identified. The Department of Agriculture and Land Reform and Phokwane Municipality were identified as key stakeholders, and the Ganspan community as primary stakeholders (beneficiaries). Secondary stakeholders are FARM-Africa and the Department of Social Services and Population Development. These stakeholders are currently involved in some projects in Ganspan. Current active stakeholders are Vaalharts Water Users' Association, Sentraalwes (Senwes), Griekwaland-Wes Landbou Kooperasie (GWK), Olam, and the Department of Housing and Local Government. The linkages between various stakeholders are currently poor, which may have a negative impact on the livelihoods of the community. There are a number of examples of such poor linkages. For instance, there are agricultural projects initiated and supported by FARM-Africa and the Department of Social Services and Population Development, with limited consultation and involvement (sometimes no consultation and/ or involvement at all) of key stakeholders such the Department of Agriculture and the Phokwane Municipality. There is currently no linkage between Phokwane Municipality and the Vaalharts Water Users' Association. The lack of linkage between these two entities is posing serious challenges to the sustainability of irrigation infrastructure in Ganspan. The moderate (and in some cases absence of) linkages between the cooperatives and the farmers in Ganspan is of grave concern. These cooperatives should be the prime market for Ganspan produce, but with weak or no linkages between these cooperatives and the farmers, the success of the Ganspan farming community seems to be at risk. Such a lack of linkages and partnerships has led to the failure of most projects. It is important, therefore, to have linkages established and improved. The various stakeholders, especially the key stakeholders, have been accused by the community of failing to deliver services that may improve their livelihoods. The Phokwane Municipality, which is responsible for the provision of services such as water, sanitation and housing as well as local economic development, is hardly 'visible' in the settlement.

The municipality does not appear to have made any effort towards improving the community's livelihood. The Department of Agriculture's mission of enhancing the livelihoods of farming communities by ensuring equitable access

and participation in agriculture has not been implemented in the community. Most of the services the department can offer have not reached the community. One such service is provision of finance to farmers through the MAFISA (Micro Finance Institute of South Africa) scheme. This is supposed to assist poor farmers to run existing agricultural businesses and start new agricultural enterprises, but hardly anyone in the farming community of the settlement knew about the scheme. The agricultural extension service provided by the agriculture department is minimal and farmers attest to the lack of technical advice from the extension agents. The Department of Housing and Local Government, which has the mandate to resolve issues of land ownership, seems to be taking too long to finalise the issues of land ownership in the settlement. All these challenges hinder the development of the community.

Future Developmental Scenarios, Driving Forces and Strategies

Stakeholders identified three possible future scenarios for Ganspan Settlement. These scenarios are strongly related to political driving forces. The first scenario involves revitalising Ganspan into a fully agricultural development scheme to ensure that households will create sustainable livelihoods through income generated from agricultural activities only. The second scenario would be to convert Ganspan into a residential area with the aim of providing houses to the wider community. This would lead to minimum income generated from agricultural activities. The third scenario would be the continuation of the settlement scheme in which people make a living through income derived from both agricultural and non-agricultural activities. This is likely to be driven by the aspirations of community members. The aim of development efforts in agricultural and non-agricultural endeavors would be to increase total household income or the relative share of its components. Stakeholders are of the view that the third scenario is the most suitable and most likely to happen.

Prioritisation of Activities

The strategies were divided into agricultural and non-agricultural stimulating strategies. Activities for these strategies were prioritised using criteria developed by various stakeholders in terms of time (short, medium and long term), resources (financial, social, natural and physical), political targets (Land Reform for Agricultural Development, Presidential nodes (areas identified by state president for prioritised development) and food security), and local potential (existing knowledge and practices, training requirements).

As short-term agricultural stimulation strategies, the training of farmers to improve their managerial, technical and marketing skills, as well as the training of extension officers to provide better mentoring to farmers were suggested. This strategy is achievable but the challenge could be the kind of farmers that should be trained. As mentioned earlier, most community members are old and training them in technical, managerial and marketing skills may not produce the desired outcome. Additionally, since they are old and close to retirement from heavy work, sustained production becomes an issue. Most of the active young people who are also comparatively literate prefer to seek employment outside the settlement. There are, however, farmer groups made up of young people who can benefit from such training. It may be important to encourage young people to go into farming and this will only happen if they begin to see positive results from farming in the settlement. In terms of non-agricultural strategies, activities that can be achieved in the short-term are the setting up of a Labour Bureau and the accreditation (evaluation) of skills unit. Given the dire unemployment situation, the Labour Bureau and the accreditation of skills may assist in securing employment for community members. The Department of Labour must be involved here as it deals with labour matters and enhancement/accreditation of skills through the various SETA (Sector Education and Training Authority) programmes. The programmes are designed to develop skills in various fields such as agriculture, construction and textiles. These short-term strategies have the potential to contribute towards reducing high unemployment in the settlement.

Medium-term agricultural stimulation strategies suggested by various stakeholders are the choice of crops that are suitable and profitable for Ganspan, demarcation of grazing land as well as communal ownership of machinery. Currently, farmers largely produce bulk crops (wheat, lucerne, groundnuts) and given the small size of the land in Ganspan, this bulk crop production does not seem profitable on small plots. Production of cabbages, for instance, could be more profitable than the current crops being produced. Crops that have the potential to generate higher incomes in Ganspan should, therefore, be carefully considered. The soils in the area are generally shallow and poor in drainage and this also makes it necessary to do a thorough study on suitable crops and what remedial action could be taken to improve the soils. A medium-term, non-agricultural stimulation strategy that would be suitable is the development of local businesses. Agriculture makes a small contribution to the livelihoods of the Ganspan community and thus venturing into other businesses could contribute to improving these livelihoods. This will require imparting business skills and also access to finance. The government has various finance schemes earmarked for the start-up of small, medium and micro enterprises (SMMEs) but information on such schemes does not seem to reach the community. The Phokwane Municipality should spearhead this exercise through its Local Economic Development Unit. Training in business operations could be done by the Department of Labour.

60

Suggested long-term, agricultural stimulation strategies include the following activities: hydroponics, greenhouses, high-value crops, specialised animal production and organic farming. These may be appropriate, given the limited land in Ganspan. However, these activities require a high level of skills and are capital intensive. Currently, there is limited local knowledge in these areas and intensive training would be required. Funding of such ventures is likely to be a challenge, especially given the low knowledge base of the farmers and their poor financial status. Promotion of agro-industries was suggested as a long-term activity for the non-agricultural stimulation strategy. This also requires high levels of skills that are not currently available in Ganspan. The financial resources required are also high. Proper planning must go into what kinds of industries are appropriate for Ganspan, and how investment can be attracted into the area.

The Way Forward

It is evident that income from agriculture plays only a supporting role in livelihoods in Ganspan. Other sources of income are more important. Development strategies should include both agricultural and non-agricultural stimulation activities.

Collaboration among various stakeholders should be enhanced in order to carry forward the process so that the ultimate goal of improving livelihoods of the Ganspan community is achieved. The establishment of an innovation platform with representatives of relevant stakeholders (including communitybased organisations) is strongly recommended, in order to jointly draft and implement integrated and inter-institutional development action plans for Ganspan.

Certain preconditions should be met before the agricultural stimulation strategy can have any positive impact. These preconditions include the issuance of land title deeds, the repair of the irrigation infrastructure, and the initiation of more market-oriented agricultural production.

References

Badenhorst, J.W., 2001, *Soil Conservation Report on Ganspan Settlement*, Department of Agriculture and Land Reform.

- Bradstock, A., 2006, 'Land Reform and Livelihoods in South Africa's Northern Cape Province', *Land Use Policy*, 23 (3): 205-360.
- Carney, D., 2009, *What are Livelihood Approaches for the Rural Poor?*, London: UK Department for International Development.

Chambers, R. and Conway, G.R., 1992, *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*, Brighton: Institute of Development Studies (IDS) Discussion Paper No. 296, IDS.

- Department of Agriculture, 2001, *Strategic Plan for the Department of Agriculture*, Pretoria.
- Department of Land Affairs, 1997, *White Paper on South African Land Policy* Pretoria.
- Eastwood, R., Kirsten, J. and Lipton, M., 2006, 'Premature Deagriculturalisation? Land Inequality and Rural Dependency in Limpopo Province, South Africa', *Journal of Development Studies*, 42 (8): 1325-1349.
- International Centre for Development-oriented Research in Agriculture (ICRA), 2008, http://www.icra-edu.org/.
- Levin, R.M., 1996, 'Politics and Land Reform in the Northern Province: A Case Study of the Mojapelo Land Claim', in M. Lipton, F. Ellis and M. Lipton, eds., Land, Labour and Livelihoods in Rural South Africa, Volume Two: KwaZulu-Natal and Northern Province, Indicator, Durban (1996), pp. 357–392.
- Machethe, C.L., 2004, 'Agriculture and Poverty in South Africa: Can Agriculture Reduce Poverty?' Paper presented at the conference 'Overcoming Underdevelopment', Pretoria.
- Moyo, S., 2006, 'The Land Question in Southern Africa: A Comparative Review', in *The Land Question in South Africa: The Challenge of Transformation and Redistribution*, L. Ntsebeza and R. Hall (eds), HSRC Press, Cape Town: South Africa, pp. 60-86.
- Ortmann, G. and Machethe, C., 2003, *Problems and Opportunities in South African Agriculture: The Challenge of Change*, : University of Natal Press. Kwazulu Natal, South Africa.
- Venter, J., 2007, *Vaalharts Agricultural Development Hub*, Department of Agriculture and Land Reform, Kimberley, South Africa.
- Vink, N. and Kirsten, J., 2003, *Agriculture in the National Economy: The Challenge of Change*: University of Natal Press, Kwazulu Natal, South Africa.

62

62

4- Norris.pmd