Cultivators in action, Siyazondla inaction? Trends and potential in homestead cultivation in rural Mbhashe Municipality

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This paper examines transformations and continuities in smallholder agriculture in southern Hobeni, in the Xhora District of the Mbhashe Local Municipality in the Eastern Cape. It draws on ethnographic fieldwork that was conducted in 1998-99, 2005, 2009 and 2010, including household surveys in Hobeni in 1998 and 2009 and in neighbouring Cwebe in 1998 and 2003. The research findings reveal both recent change—a sharp decline in the cultivation of remote fields since 1998 - and long-term continuities—the expansion and intensification of cultivation in homestead gardens, manifested in increases in the diversity of crops cultivated in gardens, in the cultivation of fruit trees and in the intensity of input application. Concurrently, the contribution of formal employment to livelihoods has declined considerably, while the contribution of welfare has expanded.

The timeframe of the research allows a partial assessment of two forms of state support to local livelihoods, the Child Support Grant and the Provincial Department of Agriculture's Siyazondla Homestead Food Production Programme (henceforth Siyazondla). Since 1998, the Child Support Grant (CSG) has expanded to reach nearly $\frac{2}{3}$ of the households in Hobeni, while Siyazondla began to assist households in southern Hobeni in 2007 with production inputs and training.

The paper engages two sets of broader debates about the potential of direct cash transfers (Hanlon et al. 2010) and subsidized inputs for smallholders (Denning et al. 2009, Sanchez et al. 2009) to serve as strategies for rural development and poverty alleviation. Hanlon et al., hailing the 'Southern Revolution' (2010: 25) in poverty alleviation, synthesize the results of

¹ The Cwebe surveys were conducted by researchers from the Rhodes University ISER and Department of Anthropology. Initial analysis of the surveys was done with spreadsheet software (Corel Quattro Pro and Microsoft Excel); they have been reanalyzed here with the statistical software R, version 2.11.1.

research on direct cash transfer programmes worldwide since the late 1990s, including South Africa's Child Support Grants (2010: 38-43). They note the repeated conclusion that such programmes are affordable and efficient. Recipients use the money well and in ways that promote long-term economic growth and human development (2010: 2). Cash transfers encourage other forms of livelihood enhancement by facilitating increased labour migration and investment and experimentation in agriculture (2010: 53-58, 75, 31-32). Nutrition is improved through purchases of more nutritious and diverse foods. School enrolment increases. They also identify two areas of continuing debate: 'should smaller grants be given to many people or larger grants to a few?' and 'should recipients be asked to satisfy conditions?' (2010: 3). At present in South Africa, old age pensions and child support grants reach far, to 85% of the population aged 63 and older and 55% of all children in 2009 (2010: 38-39). Both grants are means-tested but are otherwise unconditional. This paper will suggest, on the evidence of the poverty-stricken area of rural Mbhashe, that direct cash transfers have facilitated both an increase in school enrolment and the diversification and intensification of cultivation, and should continue.

Debates over agricultural subsidies have been more contentious. Attacked by the World Bank and the IMF, who espoused neoliberal structural adjustment policies in the 1980s and 1990s, subsidies have found favour again with the realisation that neoliberal policies have led to a widespread decline in productivity and household food security (Denning et al. 2009: 2-3). The example of Malawi is held up as an example of the benefits of subsidies. In defiance of international donors, the country has been using targeted subsidies since 2005 to produce record maize harvests and end food imports (Denning et al. 2009: 4-6). These policies have now gained support from the UN Development Program and the Gates Foundation-supported Alliance for Green Revolution in Africa (Sanchez et al. 2009: 38), which have promoted hybrid seeds and nitrogen-rich fertilizer as well as modifications to cultivation techniques (Denning et al. 2009: 6-7). Doubts have focused on the promotion of genetically-modified crops (often with increased input requirements), the environmental and economic equity consequences of agricultural change and the concern voiced by Eric Holt-Giminez of Food First that promotion of new inputs is 'a corporate strategy for colonizing Africa's food and agriculture systems' (in Helm 2008). As this paper shows, subsidies can effectively foster agricultural intensification, even without the controversial package of 'African Green Revolution' inputs promoted by Denning, Sanchez and their colleagues, by promoting the dissemination of new crops and more intensive use of local resources. The success of both

cash transfers and agricultural subsidies - in the form of basic pieces of agricultural equipment (rakes, shovels, wheelbarrows, etc.), seedlings, fertilizer and insecticide - has contributed to the expansion and intensification of garden cultivation in Hobeni.

Livelihoods in Hobeni in the late 1990s

Xhora District was long considered by officials as one of the most culturally conservative and "backward" in the Transkei. Primary education has only been available locally since the 1960s. For most of the 20th century, Hobeni was a labour reserve, with the majority of migrants comprised of men working in the mining industry. By 1996, remittances from mineworkers provided roughly 36 percent of total income in Xhora District, more than any other district in the Eastern Cape (Malherbe 2000: 10-11). The district made national headlines in 2000 when a Statistics South Africa survey declared it to be the poorest in the country (cited in Shackleton et al. 2007: 137). The region once supported the commercial cultivation of maize and tobacco, but by the 1930s, taxation and external competition from subsidized white farmers had undercut local producers (Fay and Palmer 2002).

In the late 1990s, commercial agriculture was all but absent in the district. Rainfed agriculture for local consumption remained widespread, however, facilitated by an annual rainfall averaging over 1100mm a year, with a monthly average of 100mm from October to April (Timmermans 2004: 19). Hobeni residents, like many of their neighbours in Gatyana district (De Wet and McAllister 1983, Andrew 1992; cf. de Klerk 2007 and this volume), expanded the cultivation of homestead gardens in the mid-20th century. These gardens were closer to homesteads, fenced, and generally smaller than fields, though often larger than the maximum sizes specified by the administration.² Unlike the people of Gatyana and much of the rural Eastern Cape, though, the residents of Hobeni and nearby areas did not abandon their more distant fields. These trends put them at odds with state plans to limit the size of their gardens and to move them further from their fields as part of "betterment" policies. Local resistance and inadequate resources combined to defeat successive attempts to impose betterment from the 1940s to the 1980s. The enforcement of the policy was short lived when

²1962 aerial photos of Hobeni reveal that garden cultivation there was even more widespread than in the Gatyana community of Shixini: in a sample of ten households, nine had attached gardens (compared to 61 percent in Shixini), with an average size of roughly 0.45 ha (compared to 0.19 ha in Shixini). See Timmermans 2004 for comparisons based on the 1998 household surveys of Cwebe and Ntubeni (in Gatyana).

it was implemented in the mid-1980s. Many people began returning to their pre-betterment sites by the early 1990s in Hobeni itself and across the Xhora district (see Fay 2003a, forthcoming).

Cultivation in the late 1990s took place in gardens near homesteads and in more distant fields. Typically, the agricultural cycle began with the first significant rains in September, when young men and older boys started ploughing the fields and gardens of members of their ploughing company. Some people would arrange to plough early and plant a crop of beans prior to sowing maize. Most would fertilize their gardens and fields with kraal manure, but only a handful used purchased fertilizer. While women, and some men, weeded their own gardens and fields as the maize plants grew, access to outside labour for hoeing and weeding, in the form of work parties and direct hiring, was vital if the maize was to flourish. As the maize ripened, people harvested some fresh maize for immediate consumption and left the remainder of the crop on the plants to dry until the time of harvest.

Local geographical and socio-cultural factors can explain the persistence of field cultivation in Hobeni and neighbouring Cwebe after it declined elsewhere (cf. Timmermans 2004: 137-138). Fields in Hobeni and Cwebe are relatively productive, especially on the large flood plains of the Mbashe and Ntlonyane rivers, which respond differently to both wet and dry conditions than homestead gardens do. The fields on the flood plain of the Mbhashe River, about 2km walk away from the residential area in southern Hobeni and 200m below it, are said to be very productive in dry years but susceptible to water damage in wet years. The gardens around the residential sites, on the other hand, are far less productive in dry years than they are in wet years. It is likely, too, that population pressure played a role in discouraging the abandonment of fields since Xhora has long had one of the highest population densities in the Transkei (Muller and Mpela 1987). Low wages and poor job prospects meant that people continued to depend on the limited security offered by local cultivation. The gendered division of labour also created conditions that facilitated continued cultivation: until the late 1990s, only men of working age generally migrated, leaving behind a relatively large, mainly female, labour force in the district. Work parties and ploughing companies meant that labour and traction remained highly mobile. This helped poorer homesteads to continue cultivating.

Transformations since 1999

Retrenchments and welfare

Since the late 1990s, livelihoods in coastal Xhora have changed in several directions at once: formal employment has declined, welfare income has increased, migration has diversified and field cultivation has declined while garden cultivation has increased and intensified. Access to jobs and the quality of these jobs have been adversely affected by shifts in the mining economy. By 2002, the practices of downsizing and subcontracting on the mines (Kenny and Bezuidenhout 1999, Buhlungu and Bezuidenhout 2008) had reduced mining employment to about 55% of its 1990 level nationwide (Seekings et al. 2004: 15). The impact on Hobeni has been even more severe: in Cwebe (immediately adjacent to Hobeni; see Map One), the number of households receiving remittances dropped from over 40% in 1998 to 13% in 2003 (Pade et al. 2009: 42). The Rustenburg-based platinum industry, the most common destination for migrants from Hobeni and Cwebe, led the way in the turn to much lower-paid subcontracted jobs, accounting in 2005 'for by far the most subcontracted workers...a staggering 36 percent of employment in the sector' (Buhlungu and Bezuidenhout 2008: 15).

Table One - Income sources in Hobeni, 1998 and 2009

Year	Full-time employment and welfare	Full-time employment	Welfare only	neither
1998	21%	26%	24%	28%
2009	9%	19%	56%	16%

In addition, part-time employment increased from 7% of households in 1998 to 24% in 2009. All tables are generated from household survey data.

Since most employed household members (82% of full-time workers in 2009 and 86% in 1998) are away from home for most of the year, their wages are accessed chiefly in the form of remittances. These are often irregular, both in their frequency and in the amounts sent (cf. Russell 1984).

The loss of jobs has been partly offset by the increase in access to state grants. The distribution of income sources in 1998 and 2009 illustrates their growing importance (Table One). The child support grant, not available in 1998, accounts for much of the increase. Its range has been extended several times, eventually including 'children under 14 years of age

in 2005' (Ferguson 2007: 77). By 2009, 62.5 percent of households in Hobeni were receiving child support grants, while the proportion of households receiving old age or disability pensions had increased from 45 to 55 percent. Not only did these payments make up a greater and greater proportion of income in the area but they increased women's bargaining power and autonomy because the child support grants were typically paid directly to women (cf. Posel et al. 2006, Posel 2001).

The last decade has also seen a shift in the pattern of migration; interviews and survey data reveal that migrants are seeking jobs in more diverse locales and economic sectors and increasingly working in part-time or temporary and contract positions. In a context of mining restructuring, the old pattern of male, mining-focused migration is being replaced by a more diverse pursuit of employment by more household members. This has led to an increase in female migration. The proportion of absent household members increased from 20 to 28 between 1998 and 2009. Women made up most of this increase. The ratio of male to female absentees decreased, from nearly two men for every absent woman in 1998, to about 6 to 5 in 2009. Anecdotal evidence suggests that female migration is a fairly new phenomenon in Hobeni, only beginning in the early 1980s. The rates of female migration are still lower than they are in the nearby school community of Ntubeni (in Gatyana, about 15 km to the southwest), where women already made up the majority of migrants in 1998 (Fay and Palmer 2002: 151).

Field abandonment

Land use and agriculture have also changed markedly. There has been a pronounced decline in the cultivation of distant fields (Table Two). The proportion of households cultivating home gardens has remained steady, however, so that gardens have increased as a proportion of the amount of land under cultivation.

Table Two: Field and Garden Cultivation in Hobeni, 1998 and 2009

Year	Cultivating in Gardens	Cultivating in Fields
1998	80%	65%
2009	82%	22%

It is difficult to determine the precise reasons why people have abandoned field cultivation. Studies in Gatyana have identified declines in *per capita* cattle numbers, male outmigration, declining soil fertility and damage by bush pigs as contributing factors (Andrew 1992: 88,

Timmermans 2004: 41-42). Additional reasons that can be advanced for the decline of field cultivation in southern Hobeni include changes in settlement patterns, which make unfenced fields more vulnerable to livestock damage, and increases in school enrolment, which reduce the labour available for herding or guarding fields. Another possible disincentive to cultivation is the increased access to cash that has resulted from access to the Child Support Grant

Local residents themselves generally attribute the decline in field cultivation to a lack of fencing. As Table Three indicates, complaints about lack of labour and traction remained relatively infrequent between 1998 and 2009 while there was an eight-fold increase in the proportion of people who complained about a lack of fencing, from 5% in 1998 to 40% in 2009.

Table Three: Reasons reported for disused land in Hobeni, 1998 and 2009

D	Proportion of respondents reporting (multiple answers			
Reason	allowed)			
	1998	2009		
Lack of labour / weakness	6.25%	11.25%		
Lack of traction	6.25%	7.5%		
Lack of fencing	5%	40%		
Lack of money	3.75%	-		
We don't want to	2.5%	-		
Distance from fields	-	3.75%		

The increased salience given to fencing may reflect a complaint. It is possible that informants were mentioning fencing as a way to voice their frustration at the fact that the 2003 Dwesa-Cwebe Development Plan, which included plans to fence fields in Hobeni, had still not been implemented by the Amathole Municipality at the time of the survey (see Fay 2009, Palmer et al. 2006; the fields remained unfenced as of August 2010).

The salience of fencing also reflects shifts in settlement patterns. Beginning in the early 1990s, many of the people who were moved under betterment policies in the 1980s moved

back to the pre-betterment sites which they had been using as fields. In addition, new homesteads have been established on former fields throughout southern Hobeni since 1999, including some in an area of fields which had previously been collectively fenced. A comparison of the spatial variation in the decline of field cultivation in different areas supports this analysis (see Table Four below). The area with the smallest decline in field cultivation included Mhlanganisweni, Kunene and MaBambeni, three neighbourhoods where people's fields are situated on the Mbhashe floodplain, far from settled areas.³

Table Four: Spatial Variation in Field Abandonment, 1998 and 2009

Naighboughaada	Cultivating in	Cultivating in
Neighbourhoods	Fields in 1998	Fields in 2009
Velelo/ MaVundleni/KwaDingata/KuBhula	62.5%	11%
Mhlanganisweni/Kunene/MaBambeni	67.5%	37%

Finally, there is some evidence that links the decline in field cultivation to the direct and indirect effects of the Child Support Grant. Correlation matrices, in general, reveal no statistically significant relationships between the presence or absence of field cultivation and demographic or economic variables. The one exception is the inverse correlation that exists between the number of Child Support Grants a household receives and the presence or absence of field cultivation (r = -0.26, p<0.05). The mean number of Child Support Grants is 0.94 for households which cultivate their fields while the mean for households which do not cultivate their fields is 2.29 (t = -3.1822, df = 49.78, p<0.005). This raises the question as to whether this correlation reflects changes in labour or expenditure. Are households with Child Support Grants putting children in school, rather than having them look after ripening mealie fields, or are they spending the grants to buy the maize and other food that they cultivated in the past? Interviews suggest the former: informants were emphatic that school enrolment had

³ This reflects local history: these neighbourhoods are inhabited primarily by the descendants of the first settlers in the area (cf. Fay 2005).

⁴ There is a weak and statistically insignificant correlation (R=-0.15, p=.16) between the spatial areas discussed above and the number of CSGs.

increased since the advent of the Child Support Grants, with some claiming that there was not a single child who did not attend school. The replacement of the Ngubenyathi School in Mhlanganisweni and the upgrading of the road, so as to allow for a morning taxi service to run from KwaDingata and KuBhula to Hobeni School, have made school attendance more attractive and feasible.

Whatever the cause, the trend is unmistakeable and in line with patterns observed much earlier in other parts of the Eastern Cape (e.g. De Wet 1985, Hebinck 2007): Hobeni residents are giving up cultivation in distant fields but continuing to cultivate homestead gardens. At the same time, there have been significant changes in the way that people use their gardens.

Garden crop diversification and the expansion of fruit tree cultivation

The decline of cultivation in fields has been accompanied by an increase in the diversity of the crops that are cultivated in gardens and the intensity of input application. In August 2009, I chatted with Joe Savu in his homestead in the northern part of Hobeni. He is a local government councillor whose constituency covers Hobeni. He claimed that 'nobody will buy cabbages in town this year - we will all buy in Lalini' (an alternate name for the neighbourhoods of southern Hobeni). While his comment may be an exaggeration, he drew attention to a clear expansion of garden cultivation and the growing of crops for sale that had taken place in Lalini in recent years. These trends are evident across the sample as a whole but they are particularly concentrated among members of the Siyazondla clubs.

De Klerk (this volume) recounts the history and organization of Siyazondla in the Eastern Cape and in Mbhashe Municipality, in particular. Beginning in 2004-05, the programme called for cultivators to form "clubs" of fifteen members each. The members of these clubs were eligible to receive agricultural training, production inputs, gardening tools and, in some cases, a 2500 litre rainwater tank. By directly supporting intensive garden cultivation, the programme was one of the first in the region to follow recommendations that anthropologists and other researchers had been making for years (e.g. McAllister 1992, 2001; Fay 2003b). Siyazondla, as it has been implemented in Hobeni, builds incrementally on existing homestead livelihood strategies and landholdings, in contrast to the failed Siyazondla-supported community garden project described by Blaai-Mdolo (2009), which relied on a collectively-farmed, leased plot that was separate from existing areas of cultivation. Beginning in 2007, Hobeni residents organized 15 clubs. Two of these actually received

inputs from Siyazondla. The 80 households surveyed in Hobeni in 2009 included 17 members of Siyazondla clubs, including nine members of the first two local Siyazondla clubs that had received inputs. As the account below shows, the households that have been involved in Siyazondla have been at the forefront of garden intensification in the area.

The 1998 household survey gives a baseline for recent crop diversification. In 1998, most homesteads in Hobeni grew only two or three crops. Agriculture took place only in the rainy summer months and was centred around the production of maize, beans and pumpkins for home consumption. All the homesteads that practised cultivation grew maize. There was an almost even split between beans (11) and pumpkins (8) as the second crop among the 19 homesteads that grew two crops. Nearly all the 26 households that produced three crops grew both beans (24 of 26) and pumpkins (23 of 26). Home-grown maize was usually pounded, not ground, and eaten with beans as samp (*umngqusho*). Fields were given over almost exclusively to maize, with beans and/or pumpkins intercropped.⁵

From 1998 to 2009, the crop mix in fields (among those who still cultivated fields) remained low and consistent. In gardens, however, the variety of crops cultivated increased substantially, particularly among members of the Siyazondla clubs. The sample as a whole increased from a 1998 mean of 2.3 to a 2009 mean of 3.6. The mean was 4.9 for Siyazondla club members overall and 6 for members of the clubs which had received inputs from Siyazondla.⁶

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⁵ Women also gather a variety of wild greens (*imifino*) in both gardens and fields; 78 of the 80 homesteads reported using *imifino*.

 $^{^{6}}$ The differences between these sub-samples and the overall samples are statistically significant at p<0.05

Table Five: Crops and Cultivation in 1998 and 2009

1998 2009

Crop	in gardens	in fields	sold	in gardens	in fields	sold	grown in	among
Стор	iii gardens	III IICIGS	Solu	in gardens	III IICIGS	3014	winter	Siyazondla
							WIIICI	members
								memoers
Maize	70%	65%	-	81.25%	22%	1.25%		100%
Beans	59%	23%	3.75%	52.5%	7.5%	3.75%	1.25%	65%
Pumpkins	53%	31%	-	25%	6%	-	1.25%	29%
Sweet	15%	-	-	29%	1%	-	3.75%	23.5%
Potatoes								
Potatoes	7.5%	1%	3.75%	11%	-	-		6%
Cabbage	7.5%	-	1.25%	34%	-	7.5%	15%	76.5%
Spinach	8.75%	-	2.5%	32.5%	-	6.25%	11.25%	70.5%
Tobacco	3.75%	-	1.25%	3.75%	-	2.5%	1.25%	
Carrots	1.25%	-	-	2.5%	-	-	1.25%	12%
Watermelon	0%	6.25%	-	?	-	-		
Tomatoes	1.25%	-	1.25%	5%	-	-	1.25%	12%
Beetroot	-	-	-	3.75%	-	-	2.5%	18%
Peri-peri	-	-	-	10%	-	-	1.25%	12%
Onion	-	-	-	7.5%	-	-	2.5%	18%
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Several trends in the distribution of crops are evident here. The first is the partial substitution of garden cultivation for field cultivation. Maize cultivation in gardens has increased; all but one of the households cultivating in gardens in 2009 grew maize. The cultivation of both

beans and pumpkins in gardens, on the other hand, has decreased, and has not made up for the decline in the cultivation of these crops in fields. The decline in bean cultivation may reflect a shift to a less 'traditional' staple diet, with maize being eaten as stiff pap (cooked maize meal) rather than as samp (*umngqusho*).

Secondly, the proportion of households cultivating root vegetables (potatoes, sweet potatoes, and beetroot) has roughly doubled. Cultivators tend to grow a single root vegetable: of the 32 households cultivating root vegetables, 27 grew only one, while five cultivated both potatoes and sweet potatoes.

The third trend reveals that the proportion of households growing leafy green vegetables (cabbage and spinach) has more than tripled, with Siyazondla members disproportionately represented in this category.⁷ In the majority of cases (20 out of 34), growers of leafy green vegetables cultivated both cabbage and spinach.

In the fourth place, there is also what appears to be a small increase in the sale of crops, from 8.75% of households in 1998 to 12.5% in 2009. A close examination of the data reveals that in fact there has been a complete turnover in this regard: none of the seven households that were selling crops in 1998 were still doing so in 2009 while others had begun to sell their produce. Most of these households sold two crops locally and, in a few cases, at the welfare payout points, which attract a range of small-scale traders.

Finally, 20% of households have begun growing crops in the winter. The distribution of these crops is shown in Table Five. This has been facilitated by the installation of communal water taps in four of the six neighbourhoods of southern Hobeni. This cannot the only factor, however. Five of the sixteen households cultivating in the winter live in areas without water taps. In all likelihood, the practise of winter cultivation is linked to the installation of water storage tanks. The survey did not ask directly about water tanks. It did reveal, however, that the proportion of households with a 'modern' house with a corrugated iron roof allowing for

⁷ The differences between Siyazondla members and the sample as a whole is significant for cabbage (p = 0.0007), and spinach (p = 0.0008)

⁸ This was omitted because there was only a single household with a water tank in southern Hobeni in 1998.

gutters and water tanks increased from roughly one in eleven to nearly fifty per cent (cf. Fay 2011).

Even more striking than the expansion in garden cultivation is the increase in the cultivation of fruit trees. In 1998, only 15% of households had fruit trees. These had only a single tree each, and there were only 12 trees among all the households. By 2009, 60% of households had fruit trees, with a total of 106 trees between them.

Table Six: Tree Crops in 1998 and 2009

Tree	1998	2009	Siyazondla members
Guava	6.25%	32%	47%
Peach	5%	21%	29%
Banana	2.5%	31%	53%
Lemon	1.25%	1.25%	
Orange	0	3.75%	6%
Apple	0	1.25%	6%

Table Six illustrates the variety of cultivated tree species as well as the prominence of Siyazondla members among tree cultivators in relation to the entire 2009 sample. The increase in guava cultivation is attributable in part to the removal of guavas from the Haven Hotel grounds and surrounding areas in Cwebe Nature Reserve in the early 2000s under the Work for Water programme to eradicate alien plants (cf. Fay *et al.* 2002: 83).

Cultivators attribute the rise in bananas to the Siyazondla clubs, explaining that the clubs shared banana plants among themselves and their neighbours, even though the plants were not provided by the Department of Agriculture.⁹

Changes in agricultural inputs

In addition to diversifying garden cultivation, people have changed the way they cultivate, relying less on collective agricultural labour and more on other local organic inputs and externally purchased inputs. As Table Seven reveals, there has been an overall decline in the

 $^{^{9}}$ The differences between Siyazondla members and the sample as a whole is significant for bananas (p = 0.007).

use of work parties for agricultural tasks, although there is no discernible trend concerning the frequency of work parties among those who still hold them.¹⁰

Table Seven: Agricultural Work Parties in Hobeni, 1998 and 2009

	Duamantian of Haysahalda Haldina			Mean Number held (amo		
	Proportion	Proportion of Households Holding			ls holding)	
Type of work party	1998	2009	Siyazondla members	1998	2009	
Hoeing	55%	36%	23.5%	2.3	2.3	
noeing	3370			2.3	2.3	
Weeding	10%	16%	6%	1.75	2.5	
Planting	6%	9%	6%	1.8	1.1	
Harvesting	1%	14%	12%	3	1.7	

The decline in the use of the work party appears related to the decline of field cultivation. 72% of the households that still cultivate fields continued to make use of agricultural work parties, while only 24% of those who had abandoned field cultivation still did.

It is possible that the increase in migration, discussed above, may be contributing to a shortage of agricultural labour. Only nine of the 80 respondents mentioned a lack of labour as a reason for not cultivating their fields, though (Table Three). There is also a pronounced generational aspect to the decline of field cultivation. Both surveys categorized households on the basis of a set of demographic criteria that included the age of household members and the date of the establishment of the household. Analysis of the surveys revealed that the

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There has also been a comparable decline in work parties for building; see. Fay 2011. The exception is the use of work parties for harvesting, which has increased, especially among households which still cultivate their fields. The reasons for this are unclear, but two possibilities appear likely: 1) increased agricultural output relative to labour and traction (discussed below), and 2) an increasing need to pool livestock. Although the 2009 survey did not ask about livestock numbers, there was a widespread sentiment that livestock numbers and health are declining because of the recent years of drought and the inconsistent availability of cattle dip. People may be turning to work parties to transport harvested grains that would have been transported by their own teams of oxen in the past.

Details of the procedure used are found in Fay and Palmer 2002; cf. Heron 1989, Murray 1987; Guyer and Peters 1987.

majority of long-established households, which tend to have older household heads, were still holding agricultural work parties in 2009, while only about 20 per cent of newer households were doing so.

The survey did not ask about the hiring of agricultural labour. This is an important aspect of the local economy, nevertheless. Interviews suggest that hiring labour is increasingly replacing work parties, particularly among churchgoers who do not want to brew beer or have people drinking at their homestead. In a separate survey of 38 households in Hobeni, conducted near the end of the hoeing season in March 1999, slightly over half the households (53 percent) had hired people to hoe for them in the past season, providing a total of 184 work opportunities (Fay and Palmer 2002: 171-172), while in Cwebe in 2003, 44% of households had a member who had performed agricultural work for another household (Timmermans, unpublished data). Despite the fact that labour is seldom paid for in cash, there is an accepted rate. This stood at R5 for a morning's hoeing in 1999. The practice of hiring labour is not new; old people can recall a time when the going rate for hoeing was five cents a day.

The proportion of households cultivating with oxen remained consistent: 88% in 1998 and 85% in 2009. 12 Genealogically-organized ploughing companies are the most common means of pooling oxen to form ploughing teams (Fay 2003b: 151-153; cf. Heron 1989, de Klerk 2007: 95). While tractor hire has been available sporadically at the Hobeni Store, it has never been popular, as local cultivators generally prefer the longer-term security that comes with membership of a ploughing company.

The use of locally-obtained organic inputs (kraal manure and compost) and purchased inputs (fertilizer and insecticide) has increased in gardens. This is consistent with the overall pattern of the intensification of homestead gardening. Siyazondla members are at the forefront of these trends, increasing their use of both local organic inputs and the chemical inputs that are provided to some of them by the Siyazondla programme. Interestingly, the use of purchased

This figure does not represent the entire sample since a problem in the 2009 survey instrument led several of the interviewers to skip the question about ploughing.

inputs (fertilizer and insecticide) has also increased sharply among those who cultivate fields. Those who continue to cultivate fields are doing so in a more input-intensive way.

Kraal manure is the most widely used input besides land, labour and traction. Both the prevalence and frequency of the use of kraal manure has increased in gardens (Table Nine). The level of use in field cultivation has remained about the same. The total number of reported applications for fields and gardens combined was nearly the same in 2009 (85) as it was in 1998 (88). This suggests that the manure that was previously allocated to fields is now being applied to gardens instead.

Table Nine: Use of Manure in Gardens in Hobeni, 1998 and 2009

# of Applications	1998	2009	Siyazondla Members
0	42.50%	33.75%	23.5%
1	48.75%	51.25%	47%
2	8.75%	10.00%	12%
3		5.00%	18%

Compost use reveals a contradictory trend: while the overall use decreased slightly, many of those who did use it in 2009 applied it to their gardens several times (Table Ten). Siyazondla were particularly active in this regard. The use of compost in field cultivation remained constant, practised by about one in five households.

Table Ten: Use of Compost in Gardens in Hobeni, 1998 and 2009

# of Applications	1998	2009	Siyazondla Members
 0	73.75%	83.75%	70.5%
1	26.25%	8.75%	17.5%
2		6.25%	12%
3		1.25%	

The increases in natural inputs have been matched by increases in the use of purchased inputs. Both the prevalence and frequency of the use of fertilizer in gardens have increased (Table Eleven). Fertilizer use has also increased in fields. In 1998, only 15% of those who

cultivated fields (N=52) used it; 55% of those cultivating fields (N=18) applied fertilizer in 2009.

Table Eleven: Use of Fertilizer in Gardens in Hobeni, 1998 and 2009

Siyazondla Members	2009	1998	# of Applications
70.5%	77.50%	87.50%	0
23.5%	17.50%	12.50%	1
	2.50%		2
6%	2.50%		3

Pesticide use in gardens increased more than fivefold, as illustrated in Table Twelve. A similar increase occurred in fields, from a single household in 1998 to six, or one-third of the total, in 2009. Pesticide use is a concern, given the potential for overuse or misuse, although interviewees who had been provided with pesticide and sprayers by Siyazondla were consistently able to accurately explain the procedures for dilution and application.

Table Twelve: Use of Pesticide in Gardens in Hobeni, 1998 and 2009

Siyazondla Members	2009	1998	# of Applications
47%	72.50%	95.00%	0
35%	20.00%	5.00%	1
6%	3.75%		2
12%	3.75%		3

The overall picture that emerges with regard to agricultural inputs is consistent with the developments in the cultivation of homestead gardens that have been discussed earlier in the chapter. Hobeni residents have been intensifying their cultivation of homestead gardens. Siyazondla members have been particularly prominent in this process; they have not only increased their use of the chemical inputs that the Siyazondla programme has provided to some of them, but they have also increased their use of locally-available organic inputs. This suggests that the intensification of homestead garden cultivation cannot be attributed solely to the availability of outside resources.

Attributes of Farming Homesteads

The surveys give some indication of the attributes that characterise those homesteads that are particularly involved in agriculture, and the ways in which the correlates of involvement in agriculture have changed over time. I have generated correlation matrices (cf. Bernard 2006: 644-645) from both the 1998 and 2009 surveys in order to identify the strongest correlations with four indicators of involvement in agriculture: the number of crops grown in fields and in gardens and the presence or the absence of stored beans and maize).¹³

I have focussed on the correlations with garden crops and with the presence/absence of stored beans/maize. The correlations for field crops have already been discussed earlier in the chapter, in the section on field abandonment. For garden crops, I have identified five variables with statistically significant correlations in either the 1998 or the 2009 survey. Because of the importance of welfare income in the pattern of field abandonment, mentioned above, I have also included a nearly-significant correlation with welfare incomes (p=0.06 for 2009).

Table Thirteen: Correlates of Garden Crop Variety, 1998 and 2009

Variable	1998	Direction of change	2009	
# of times manure	0.43*	+	0.47*	
applied to garden	0.43	Т	0.47	
# of resident children	0.20*		0.22*	
under 7	0.30*	-	0.23*	
# of work parties for	0.27*		0.21	
hoeing	0.27*	-	0.21	
# of residents	0.27*	+	0.39*	
# of work parties for	0.25*		0.21	
agriculture	0.25*	-	0.21	
# of incomes	0.11	+	0.22*	
# of welfare incomes	-0.05	+	0.21	

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¹³ The correlation coefficient that has been used is Pearson's product moment correlation (Pearson's r), so that the proportion of variance explained is equivalent to r^2 (Bernard 2006: 626-632); following Cohen's (1992) rule of thumb, r > 0.10 and < 0.30 can be considered a "small" effect, r => 0.30 and < 0.50 "medium" and r => 0.50 "large."

of fruit trees 0.02 + 0.35*

All of the correlations were stronger in 2009, with the exception of the correlation with the number of agricultural work parties, which decreased. The correlations with manure use in gardens, planting of trees and agricultural work parties are all unsurprising. Crop diversity increases with the number of residents and probably reflects a mixture of labour availability and household consumption needs. Because larger households tend to have access to more grants (in 2009, but not in 1998, before the Child Support Grant was put in place), there is also a correlation between crop diversity and welfare income in the 2009 data. This may simply reflect demography, but it may also reflect women's allocation of cash to gardening as they gain access to more income.

Neither of the surveys measured absolute agricultural yields. Both surveys took place in August, roughly three or four months after the harvest season. The household surveys did not attempt to measure agricultural yields because variations such as weather conditions, intercropping, consumption of standing crops and local cultural definitions of edibility and value make them difficult to gauge in a once-off survey (McAllister 2000). Rather than ask respondents to recall details of a harvest that had taken place three or four months before the survey, I decided to ask people about the supplies that they had on hand (Table Fourteen)

Table Fourteen: Stored Crops in Hobeni, 1998 and 2009

Crop	1998	2009
Maize	40 (50 to 400kg)	50 (10kg to 750kg)
Beans	30 (10 to 250kg)	18 (2.5kg to 50kg)

As McAllister (2000: 15) notes, annual climatic variation means that one would need a longer-term sample to assess trends in yields. Still it is notable that *despite* declines in both field cultivation and agricultural work parties, the proportion of homesteads with stored maize has increased. There are no significant differences between Siyazondla members and non-members in terms of whether or not they have stored maize/beans.

The variables that are correlated with the presence or absence of stored crops remained fairly consistent between 1998 and 2009 (Tables Fifteen and Sixteen). Neither survey reveals a

^{*} indicates correlations significant at p<0.05 or less

strong correlation between stored crops and household consumption needs (calculated following Donham 1981, Heron 1989, and Bembridge 1991; see Fay 2003a: 296). Stored maize remains significantly correlated with use of manure in fields, but it is no longer significantly correlated with the use of manure in gardens or with the cultivation in fields. The number of work parties held for hoeing (the most critical task in maize cultivation) has become the best predictor of stored maize.

Table Fifteen - correlates of stored maize at time of survey

Variable	1998	Direction of change	2009	
# manure in garden	0.34*	-	0.18	
# manure in field	0.33*	-	0.23*	
# of work parties for	0.30*		0.28*	
hoeing		-	0.28	
field cultivation	0.26*	-	0.1	
# of welfare incomes	0.17	-	-0.16	

^{*} indicates correlations significant at p<0.05 or less

Interestingly, a statistically insignificant correlation (1998 p=0.13; 2009 p=0.15) between welfare incomes and stored maize has been reversed; access to welfare income is now correlated with a lack of stored maize. The inverse correlation is marginally stronger (-0.18, p=.10) for the number of CSGs. While households with CSGs tend to grow a wider range of crops in their gardens (Table Thirteen), they are less likely to have stored maize (Table Fifteen). This may reflect the tendency for households with CSGs to abandon field cultivation, but it may also be the case that more land in gardens is given over to vegetable and tree crops when households use CSGs to purchase maize and samp.

Fewer households overall had stored beans in 2009 (Table Fourteen). This may reflect seasonal variation, but it is also probably a consequence of the decline of field cultivation. In contrast to maize, the cultivation of beans in gardens has not increased to make up for the decline of the cultivation of beans in fields (see Table Five above). The variables correlated with stored beans remain the same (Table Sixteen), with the exception of compost use in gardens, which is no longer correlated with stored beans, and the number of residents over 13.

Table Sixteen - correlates of stored beans at time of survey

Variable	1998	Direction of change	2009
# manure in garden	0.45*	-	0.25*
# manure in field	0.43*	-	0.22*
# of work parties for	0.32*		0.31*
agriculture	0.32*	-	0.31
# of work parties for	0.30*		0.29*
hoeing	0.30	-	0.29
# compost in garden	0.24*	-	-0.02
residents over 13	0.03	+	0.29*
II C 4	0.04		0.02
# of grants	0.04	-	

^{*} indicates correlations significant at p<0.05 or less

Household Case Studies

This section presents more detailed accounts of three households in order to to give a more personal picture of the kinds of trajectories of livelihood change that occurred in the decade before 2009. The first case concerns a household in which the effects of jobs losses have been partly offset by access to the Siyazondla programme and CSGs.

The household of Elias and MaDingata Magqazolo was established at a site in MaVundleni in 1997. Elias' father had been removed under the betterment programme in the mid-1980s. He died at his betterment site, but was buried at his natal homestead. Elias, in his early thirties, moved back to this site in 1997. He was employed full time on the mines, while his wife, a Zionist church member, remained at home with their three young children. They cultivated maize, beans and pumpkins in their garden and in a field. At the time of the survey in 1998, they still had small stocks of both these crops in storage. They applied manure and compost to their garden and compost to the field. They had held five work parties for various agricultural tasks during the year.

Both their life situation and their approach to cultivation had shifted considerably by 2009. Elias was living at home; he had been retrenched following an injury at work and had made several trips to Madwaleni Hospital in Gusi to try to get a medical recommendation for a disability pension. His only income came from occasional work for fishermen staying at the Haven Hotel. The couple now had five resident children of their own and were also taking

care of two of MaDingata's sister's young children. All told, they had six Child Support Grants, providing a monthly income of R1200. All their school-age children were attending school. A daughter had married and moved to her husband's family about 5km away. They had received bride wealth but this was cancelled out, they explained, by the cost of buying the furniture, kitchen supplies and so on that the bride had to take to her husband's home.

MaDingata signed up as part of the first Siyazondla group in Hobeni in 2007. The couple had stopped cultivating their fields, attributing the decision to a shortage of cattle for traction and a lack of fencing materials. Both Elias and MaDingata worked in their homestead garden, however, cultivating maize, beans and five other vegetable crops as well as a dozen banana plants and two guava trees. They had increased the applications of kraal manure to three annually, along with one of compost, but no longer held work parties. They were able to manually water their cabbages and spinach in the winter because they lived near a water tap. Elias was busy building a cement stand to mount the 2500 litre rainwater tank they had received from the Siyazondla programme. Elias and MaDingata's homestead nicely illustrates a number of the trends described earlier in this chapter: the shift in income patterns that has followed retrenchments, the expansion of the welfare system and the transformation of garden agriculture.

The case of Jomjom and NoAnswer is different from that of Elias and his family in many important respects. It is more typical of the older, previously mining-dependent homesteads and reveals substantial continuities between 1998 and 2009, despite the death of the household head in that time. Jomjom was in his mid-50s and working on the mines in 1998. He had recently moved his wife and children to his family's pre-betterment site. They were growing maize and beans in their field and maize and sweet potatoes in their garden. They used manure in both field and garden. They had held four work parties for hoeing and weeding and had about 400kg of maize and 50kg of beans in storage. NoAnswer and several children were receiving welfare payments in 2009. They had added a rondavel to the homestead, but not a "modern" house suitable for rainwater collection. Their cultivation practices were largely unchanged: they still grew two crops (maize and beans) and held four agricultural work parties during the season. They had also held two extra work parties in order to construct a fence for their field. They had remained in the same ploughing company, one of the few in the area not based on kinship ties. This company had continued to plough their land after Jomjom's death. At the time of the survey, they had about 450 kg of maize

and 100kg of beans on hand from the prior season. Not part of Siyazondla, generally tied into more conservative networks of neighbours and kin, Jomjom's homestead had continued to follow the old agricultural ways.

The third case, that of Zikhelele and NoFenitshala's homestead, illustrates intensification without Siyazondla support. This homestead has managed to avoid the retrenchments that have affected so many others and has also been able to expand the agricultural component of its livelihood. In 1998, Zikhelele, about forty years old, worked on the mines while NoFenitshala lived at home with the couple's four children. They grew the usual three crops (maize, beans and pumpkins) in their garden, with no additional inputs or work parties. The stocks from the last harvest had run out by the time of the survey.

By 2009, their oldest son had joined his father in full-time work on the mines. Three of the couple's six children and one resident grandchild were receiving CSGs. The family that had occupied their field during the betterment years had moved away, allowing Zikhelele and NoFenitshala to grow maize in the field. They had also added cabbage, spinach, potatoes and a peach tree to their garden and built an "American Flat," which would allow them to collect rainwater in the future. Although they were not Siyazondla members, they had increased their use of external inputs. They used manure, compost, fertilizer and insecticide in both their garden and field. They said that the fertility of both the field and the garden had increased greatly (1 on a 1-5 scale), and were the only household in the survey to answer 1 for the fertility of their field. They relied on household and hired labour to cultivate and made no use of work parties. They had sufficient oxen to put together a ploughing team on their own. This maximized their flexibility with regard to the timing of ploughing. While they did not have stored crops at the time of the survey, their overall trajectory has clearly been one of using cash income in order to diversify and intensify cultivation. Their example illustrates that there is an enthusiasm for agriculture among some younger households and a willingness to intensify and experiment, even among those households that are not directly linked to Siyazondla.

Conclusion

While the trajectories of individual homesteads may vary, the overall picture that emerges from the 1998 and 2009 surveys is one of an increasing intensification and diversification of garden cultivation alongside a decline in field cultivation, partly shaped by changes in labour

availability and welfare incomes. Given these findings, how can one evaluate existing state support to local livelihoods?

The first point that needs to be emphasised is that the recent downward trend in Siyazondla funding is troubling. It contradicts the international 'return to subsidies as a potential intervention for promoting food security and agricultural growth' (Denning *et al.* 2009: 3). The Siyazondla programme possesses great promise. It can be seen as evidence that the Eastern Cape Agriculture Department is finally focusing on home gardens, in line with longstanding but largely ignored recommendations (e.g. McAllister 1992), and is willing to provide the resources that smallholders need to strengthen the long-term trend towards garden intensification. Moreover, the programme has shown that intensification can be fostered even in the absence of the 'African Green Revolution' package of hybrid seed, etc. promoted in the work of Sanchez, Denning and their colleagues.

Siyazondla in Hobeni has built effective networks for disseminating agricultural resources and information (notably in the case of banana cultivation, which is said to have spread *through* Siyazondla clubs, even though the Agriculture Department has not promoted bananas). It has also demonstrated the potential of homestead cultivation to enhance livelihoods, nutrition and food security. As the data presented above reveals, Siyazondla members stand out from the sample as a whole. They produce a greater diversity of crops and use more inputs. It is significant that this extends to locally-obtained inputs (manure and compost). This indicates that the programme has fostered the use of existing resources to increase agricultural productivity without additional financial costs to the government or to the smallholders themselves.

It would be a tragedy if this support were allowed to languish. The programme's budget increased steadily until 2007. Since then, though, the budget has been cut, shrinking in 2010-2011 to less than a fifth of its 2006-2007 level, precluding the drop in the distribution of inputs and tools to more recently-formed clubs (De Klerk, this volume). While 30 homesteads in Hobeni have received material support from Siyazondla so far, another 195 have joined Siyazondla clubs and would be in a position to benefit if the programme's donations resumed. There is also unrealized potential to expand the programme so as to reach homesteads such as Zikhelele and NoFenitshala's, described above, which are actively engaged in cultivation but which do not form part of a Siyazondla club. 21 percent of the homesteads which did *not* belong to Siyazondla clubs grew six or more crops in their garden,

whereas in 1998, only a single homestead cultivated as many as six garden crops. Faced with retrenchments and the prospect of chronic unemployment, people in Hobeni - and no doubt, across Mbhashe Municipality - are generally eager to pursue garden cultivation as a way to enhance their livelihoods. The state should be supporting these initiatives, not allowing the networks built under the Siyazondla programme to decline.

A second conclusion that can be drawn from evaluating the surveys is that the Child Support Grant (CSG) appears to have had a positive effect on cultivation overall. The CSG reaches the women who are involved in garden cultivation on a day-to-day basis because it targets mothers. Access to CSGs is positively correlated with garden crop diversity, which, in turn, benefits children's nutrition. While the availability of cash may have led some families to substitute purchased food for the maize and beans that they previously cultivated in their fields, the potential decline in agricultural output that has accompanied the decline in field cultivation has been outweighed by the long-term benefit of higher school enrolment that follows from greater access to cash. As the 1998 survey data reveals, long-term access to education has measurable effects on livelihoods. A third more households had members in full-time employment in Ntubeni, where schools had been present and popular since the 1900s, than was the case in Hobeni and Cwebe, where schools were only introduced after funding increases in the 1960s (Fay and Palmer 2002: 156-157).

Neither the Siyazondla programme nor the Child Support Grant is likely to produce revolutionary changes in local livelihoods. Like any intervention, they have the potential to disappoint and to create jealousy. They also provide benefits unequally in an already-differentiated rural population (cf. De Klerk, this volume). But both, by building on existing activities and aspirations while providing new capabilities and livelihood options, deserve continued support as part of a broad-based poverty reduction strategy.

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