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**The role of urban agriculture in addressing household poverty and food security: The case of South Africa**



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# **The role of urban agriculture in addressing household poverty and food security:**

## **The case of South Africa**

Paper prepared for the Global Development Network Project, “Institutional Capacity Strengthening of African Public Policy Institutes to Support Inclusive Growth and the MDGs”, April 2009.

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## Contents

List of figures.....	iii
List of tables .....	iv
Abstract .....	v
1. Introduction.....	1
2. Methods and study area .....	2
3. Review of the relevant literature.....	4
4. Policy in South Africa .....	7
5. A biographical profile of UA practitioners.....	10
5.1 Gender of UA practitioners .....	10
5.2 Involvement of household members in UA activities .....	11
5.3 Age of UA practitioners.....	11
5.4 Levels of education.....	11
5.5 Household size .....	12
5.6 Number of years of involvement in UA .....	12
5.7 Type of UA involvement .....	13
5.8 Synthesis .....	14
6. Production and production processes .....	14
6.1 An overview of production .....	14
6.2 Production .....	17
6.2.1 Types of crops produced .....	17
6.2.2 Animal husbandry.....	18
6.2.3 The value of crop production .....	19
6.3 Inputs .....	20
6.3.1 Origins of inputs .....	20
6.3.2 Cost of inputs versus production value .....	21
6.3.3 Access to water.....	21

7. Income .....	22
7.1 An overview of annual household income.....	22
7.2 Location and income.....	25
7.3 Types of UA activities and annual household income .....	26
7.4 Gender and household income .....	27
7.5 Age of individuals involved in UA and income from UA.....	28
7.6 Education levels of individuals involved in UA and income from UA.....	29
7.7 Number of years of involvement in UA .....	30
8. Expenditure.....	30
8.1 Location and food expenditure.....	32
8.2 Total household income and food expenditure .....	32
8.3 Gender of those involved in UA and food expenditure .....	33
8.4 Number of years of involvement in UA and food expenditure.....	33
9. Institutional aspects .....	34
9.1 Main reasons for being involved in farming / UA .....	34
9.2 The most serious problems experienced in respect of production .....	35
9.3 Product trading on the open market.....	36
9.4 Support required from government .....	37
9.5 Technical support and extension services.....	37
9.6 Circumstances that would stop farming activities.....	39
9.7 Legal constraints.....	40
10. Food security.....	40
11. Conclusion .....	46
References .....	49
Annexures.....	52

## List of figures

Figure 5.1: Average household size per location, 2008 .....	12
Figure 6.1: An overview of UA productions, 2008 .....	16
Figure 6.2: The ten most produced crops in UA activities, 2008 .....	18
Figure 6.3: The type of animal kept by UA practitioners, 2008.....	19
Figure 7.1: A profile of annual household income per source of income, 2008 .....	23
Figure 7.2: Income profile per location, 2008 .....	25
Figure 7.3: A comparison of incomes for the various types of UA activities (for household who have reported selling produce),2008 .....	27
Figure 7.4: Income per gender and type of UA activity, 2009 .....	28
Figure 9.1: The most serious problems experienced in respect of agriculture and production .....	35
Figure 9.2: Trading of products on the open market.....	36
Figure 9.3: Respondents who received technical assistance, 2008.....	38
Figure 10.1: Degree of food insecurity that was experienced, 2008 .....	41
Figure 10.2: Degree of food insecurity was experienced in three different projects.....	45

## List of tables

Table 5.1: Number of years of involvement in UA, 2008.....	12
Table 5.2: The distribution of types of UA activities per urban area in South Africa, 2008 ..	13
Table 6.1: The sources of funding for inputs, 2008.....	20
Table 6.2: Input cost versus production value per household, 2008.....	21
Table 6.3: Sources of water access for UA practitioners, 2008.....	21
Table 7.1: Income from UA according to the age of those involved in UA, 2008.....	29
Table 7.2: Income from UA according to the education of those involved in UA, 2008 .....	29
Table 7.3: Income according to the number or years involved in UA, 2008 ( only for those receiving income from UA).....	30
Table 8.1: Household expenditure for UA practitioners per type of UA activity, 2008.....	31
Table 8.2: Percentage of household expenditure devoted to food by location, 2008 .....	32
Table 8.3: Percentage of household expenditure devoted to food by household income .....	32
Table 8.4: Percentage of household expenditure devoted to food by gender of individual involved in UA, 2008.....	33
Table 8.5: Percentage of household expenditure devoted to food by period of involvement in UA, 2008 .....	33
Table 9.1: Reasons for involvement in farming / agriculture.....	34
Table 9.2: Support required from government .....	37
Table 9.3: Technical support / extension services needed .....	39
Table 9.4: Circumstances that would induce respondents to stop farming, 2008 .....	39
Table 10.1: Average food security rating by total household income, gender and period of involvement, 2008.....	43

## **Abstract**

This report reflects on Urban Agriculture in four South African urban areas, and focuses on the question as to whether there is any empirical evidence (an aspect which has been identified as a shortcoming in the literature) that Urban Agriculture contributes towards addressing the Millennium Development Goals. The report is contextualised by a review of the existing literature, as well as of the policy guidelines on food security in South Africa. The conclusion reached in the report is that, within the context of multiple livelihoods urban agriculture accounts for about 7% of the income of the households involved. There is also evidence that urban agriculture provides a way to absorb poorly-skilled people into the economy and that income generated in this way makes some contribution towards addressing the Millennium Development Goals. The results also point to a number of policy considerations which need to be investigated in more detail. These include planning and land-use for urban agriculture, the type of technical support, a stronger emphasis on addressing productivity in back yards, and the degree to which urban agricultural activities should be subsidised.

## 1. Introduction

The available literature is ambivalent in its assessment of the role of Urban Agriculture (UA) in addressing poverty and ensuring larger degrees of food security in South Africa while claims about the role of UA with regard to nutrition and food security are often made without being based on any empirical evidence in this respect (Webb, 1996, 1998a, 1998b; Rogerson, 2003). In general, research suggests that UA is, at most, a mechanism used by the poor in order to cope (May and Rogerson, 1995). Against the above background, the question is: what type of evidence is there in respect of the role of UA in addressing poverty and food security? In terms of the Millennium Development Goals (MDGs), the relevant question is: to what degree would UA be able to reduce the number of people living on less than 1USD per day? Furthermore, if there is some indication that UA does, in fact, play a role in reducing the number of people living on less than 1 USD per day, it is necessary to determine the urban planning implications in this regard.

The aim of the paper is to determine the role played by UA in the income patterns of households involved in UA activities.<sup>1</sup> An earlier paper in this series (see Burger et al, 2009) provided a thorough overview of the profile of UA practitioners: but no income data were available. This paper aims to provide a further profile of UA practitioners and compare the data with the information in the earlier report, and also to assess the role of UA in terms of income and food security activities.

Against the above background, the paper is structured as follows:

- It starts off with an overview of the methods used during the survey. As this report reflects on interviews conducted in four of the main urban areas of South Africa a brief description of the institutional responses to UA is provided (a more detailed description is available from Nel et al., (2009)).
- This description of the methods used is followed by a brief reflection on the literature. Specific emphasis is placed on the available evidence in respect of the role of UA in addressing poverty and food security.

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<sup>1</sup> It should be noted that this paper is one in series of four. The other papers deal with the following aspects: 1) a broad overview of UA in South Africa, based on the South African Household Survey 2) a more detailed assessment of institutional responses to UA; and 3) a report similar to this one, dealing with UA in Zambia.



- In the light of the information provided in the section on institutional responses, the paper then provides a brief overview of the biographical attributes of UA practitioners. The paper by Burger et al. (2009) suggested that UA practitioners are mainly comprised of poorer households. Attention is therefore focussed on the question as to whether the results obtained from this survey are different in any way.
- Next, a profile of UA production is provided. The earlier report by Burger et al. (2009) did not provide any significant overview of production processes and the value of production. This report attempts to address this gap.
- The above-mentioned profile is followed by an assessment of the impact of UA on poverty aspects. Consideration is given to aspects of income and expenditure and the role of UA income in assisting lifting people to rise above the 1USD per day indicator set in the MDGs.
- The emphasis then shifts to an assessment of the role of UA in addressing food security.
- Finally, some conclusions are reached and recommendations are made.

## **2. Methods and study area**

As already noted, the paper is based on 396 interviews conducted across South Africa. These interviews were more or less equally distributed amongst the following four centres (the number of interviews per centre is indicated in brackets):

- Johannesburg (Soweto) (98)
- Durban (Kwamashu) (101)
- Cape Town (97)
- Bloemfontein (Mangaung, Botshabelo, Thaba Nchu) (99)

A snowball sampling approach was used, as it was basically impossible to identify the sampling population in advance. The main reason why this method was used is that UA activities were not always very prominent in the two inland cities (Johannesburg and Bloemfontein). This was found to be the most appropriate method, as the interviews had to include UA practitioners on communal land, back-yard crop growers and UA practitioners involved in animal husbandry. An attempt was made to conduct each interview with the UA practitioner in the household. Where this was not possible, the head of the household was

interviewed. In the process 86% of the interviews were conducted with the UA practitioner (or one of the UA practitioners in the household). An attempt was made to follow the guidelines of the South African Household Survey, in order to ensure a relatively even distribution between interviewees who produced crops and those who practised animal husbandry; but this was not always possible. For the most part, it was also easier to identify crop production than animal husbandry.

In addition to these individual interviews, more in-depth assessments of the institutional responses towards UA in the four cities mentioned above, were conducted. The more detailed assessment of the institutional responses is addressed in the report by Net et al. (2009); and therefore this section will merely provide a brief overview. Such an overview is important in order to assess the possible role played by institutional responses in respect of UA income and production processes.

The two areas with the most comprehensive institutional responses towards UA are Cape Town and Durban (eThekweni metropolitan area). Cape Town is noted as a city in which UA is well established, and also as a centre with a long-standing municipal awareness of the role and importance of UA. Significant in this regard are the well-established policy frameworks that have evolved over a period of time, and active engagement in applied projects. A range of support programmes also seem to be available.

The institutional response in Durban (eThekweni) has also been prominent. In this municipality, the Parks Division is the main implementing agency. Their main point of departure is that the city has many open spaces which need to be maintained. Rather than spending large amounts of funding on maintaining these spaces, the Councils makes them available to UA practitioners. In the process, some of the available funds are used to plough the open spaces for UA practitioners.

In the case of Bloemfontein (Mangaung), the response is far less prominent at an institutional level; but an existing partnership between the municipality and the University of the Free State's Faculty of Natural and Agricultural Sciences assists UA practitioners, in particular, by providing stock to enable them to engage in financially viable activities and helping them to

obtain access to land in terms of the South African land reform programme. The response in respect of urban crop production is limited to a few small projects across the municipality.

In Gauteng (South Africa's economic heartland), a range of undertakings and projects are in process; but it seems that the majority of these have been implemented in terms of a social-welfare perspective, and that the emphasis has mainly fallen on a project-by-project approach, rather than a full institutional response.

What seems clear from the above overview is that Cape Town and Durban (eThekweni) have the most prominent institutional responses. The question is whether this is also evident in the comparative figures obtained on the basis of the interviews with practitioners.

### **3. Review of the relevant literature**

The first academic reflections on UA activities in Africa resulted from the engagement of a number of French geographers in West Africa during the late 1950s (Mougeot, 1999). However, it was only during the early 1970s that a steady increase began to occur in terms of the body of literature focusing on UA as a coping strategy for low-income households in urban areas of developing countries (Rogerson, 1996). Simon (in Nel 1999:19) argues that it is perhaps no coincidence that this increase in UA research in the early 1970s took place in the wake of global oil shocks and economic crises, in respect of which "none have felt the impact more acutely than the billion or more impoverished people across the Third World". The same could probably be said in respect of the current world recession.

Although a number of debates have been conducted in respect of UA, there are virtually no universally true statements, as the contexts in different environments differ significantly. Yet four debates that are featured in the literature are important for the context of this paper:

- The institutional response debate, which reflects on the initial resistance against UA, as well as the recent, more positive responses in support of UA.
- The debate as to whether UA does, in fact, address poverty and food security issues.
- The planning and land use debate.
- The economic planning argument that agriculture has a significantly higher labour absorption rate than other economic sectors.

The road towards institutional acceptance and support of UA has been difficult. It is interesting to note that UA was commonly practised in pre-modern cities. However, with the rise of modernisation, the concept of separate urban land-uses became conventional wisdom. It was as a result of these modernised planning principles that UA was outlawed under colonial rule in Africa. Yet not much has changed in the post-colonial period. In this respect, Tinker (1994:5) argues that UA activities are often regarded as “unsightly”, or even outlawed, while Binns and Lynch (1998:778) allege that UA activities tend to be “underevaluated and resisted by public officials”. Although the hard-line anti-UA sentiment has probably diminished over the past decade or two, it has not necessarily been replaced by a proactive response. One of the cases in which UA has been recognised and integrated into planning is that of Dar es Salaam (Mwalukasa, 2000). However, in many countries agricultural support is biased in favour of rural areas, with no support being given to UA activities, while Zimbabwe probably remains the country with the most hostile institutional response towards UA. The following quotation confirms the Zimbabwean response:

*[The] Zimbabwe police have extended a demolition campaign targeting the homes and livelihoods of the urban poor to the vegetable gardens they rely on for food, saying the crops planted on vacant lots are damaging the environment ... The crackdown on urban farming -- at a time of food shortages in Zimbabwe -- is the latest escalation in the government's month-long Operation Murambatsvina (or Drive Out Trash), which has seen police torch the shacks of poor city dwellers, arrest street vendors and demolish their kiosks (Mail and Guardian Online, 2005).*

Apart from the issue of institutional acceptance, the acceptance of UA in general has serious planning implications which are seldom considered. In the first place, the size of stands is a relevant factor. Larger stands would theoretically provide the basis for UA production. At the same time, larger stands are in direct conflict with the idea of the compact city and the higher densities often proposed in urban development policy in South Africa. Secondly, in this regard, there are also implications for land-use planning in urban areas – especially the planning of open spaces.

Although a number of factors contributed to the limited institutional response with regard to UA, the fact that very little empirical evidence was available regarding the role of UA as a livelihood and food security strategy has also played a part in creating this situation (Webb,

1996, 1998a, 1998b; Rogerson, 2003). Thornton (2008) argues that this lack of evidence can be attributed to the fact that the majority of studies have been qualitative, and have tended to emphasise crop production systems at the expense of livestock systems. Despite these limitations UA has often been described as a household survival strategy for the urban poor in developing countries (Drakakis-Smith, 1992; Rogerson, 1992, 1996, 2003; Smit et al., 1996; Mougeot, 1994, 1999; Deelstra & Girardet, 2000; De Zeeuw et al., 2000; Jacobi et al., 2000; Hovorka, 2005), while other researchers have emphasised the role of UA in food production (Rogerson, 2003; Thornton & Nel, 2007; Thornton, 2008). Sahn (1989: 310) summarises these general views as follows: “home gardening may be an effective intervention for food insecurity and low-income households beyond that of normal field agriculture, in particular during seasonal food shortages.”

The third relevant aspect to be considered in this section relates to the role of agriculture, in general, in attracting individuals who are not highly skilled. The world economy has become far less labour-intensive on an overall basis, and this is also applicable to agriculture. However, there are still analysts who argue that agriculture contributes significantly to the absorption of people with lower skills into the economy. The White Paper on Agriculture summarises this argument as follows: “Agriculture's linkages with the rest of the economy are such that, within the 1985 production structure, an increase in agricultural production resulted in the creation of more jobs throughout the economy than was achieved by an increase of the same order in any other sector. For additional capital invested in agriculture the effect on employment would be similar” (Department of Agriculture, 1995: Addendum A, section 1.2). This tendency of the Agricultural sector to absorb more people per unit of investment is also confirmed by other researchers and documents (Hall, 2004; Pauw, McDonald & Punt, 2007) although the international competitiveness of labour-intensive agriculture has also been questioned (Altman, 2001). Considering the fact that UA is mainly practised for the purposes of self-production and local markets it seems as if UA *per se* could assist in providing some form of access to low-income and unskilled people, while investment in UA – compared to other economic sectors – may yield the highest level of job-creation (despite the fact that it might admittedly be very low).

In the light of the literature review, the rest of the paper will evaluate the interviews conducted with 400 UA practitioners, by considering the potential of UA to absorb unskilled

people, the role played by UA in addressing the MDGs, as well as the role played by the institutional responses of the various city governments in this respect. At the same time, an attempt will be made to identify the planning implications of the findings.

#### **4. Policy in South Africa**

The Reconstruction and Development Programme (ANC, 1994), which served as the African National Congress's election manifesto for the 1994 election, identified "nutrition" as one of the basic needs to be met in a democratic South Africa. This was to be achieved through land reform, job-creation, and the reorganisation of the economy. More specifically, ensuring low-cost food, the regulation of prices, the exemption of basic foodstuffs from value-added tax (VAT), the development of information systems, etc., were envisaged as strategies. "Access to food" was also identified as part of the basic need of "social security and social welfare". In this regard, efficient production of food and the encouragement of food security through rural development, land reform, and a review of the agricultural sector were to be the objectives that were pursued. Food security was given further impetus, as well as a legal basis, through the 1996 Constitution (Republic of South Africa, 1996). The Bill of Rights identified "sufficient food and water" as a basic right. It was also stipulated that the state must, "by legislation and other measures, within its available resources", provide assistance with a view to the "progressive realisation of the right to sufficient food".

The first attempt to develop food security in terms of policy was the White Paper on Agriculture (Department of Agriculture, 1995). The mission statement for agricultural policy, as set out in the White Paper on Agriculture, was to "ensure equitable access to agriculture and promote the contribution of agriculture to the development of all communities, society at large and the national economy, in order to enhance income, food security, employment and quality of life in a sustainable manner". The White Paper on Agriculture recognised that food security consists of both national and household food security. National food security was defined as "the availability of a constant supply of sufficient, safe, and nutritious food for the population within the country, whether from production, imports, or stocks". Household food security was defined as "the availability and accessibility to households of affordable, nutritious food, whether from their own production, purchases, social welfare, or community support". According to the White Paper on Agriculture, national food security needed to be addressed through increasing the efficiency of food production and exploiting competitive

advantages. Household food security needed to be addressed by means of job-creation, social subsidies, food distribution, land reform, urban food-production, and the reduction of the price of foodstuffs. The ideas put forward in the White Paper on Agriculture were further developed in the Discussion Document on Agricultural Policy (Department of Agriculture, 1998).

The Discussion Document on Agricultural Policy further affirmed the distinction between national and household food security. It also endorsed the ideas of addressing food insecurity through job-creation (specifically in the agricultural sector), own food production, more efficient production, and a more equitable distribution of resources (especially in terms of access to productive resources). Furthermore, while the White Paper on Agriculture identified the need for further research into smallholder farming, the Discussion Document on Agricultural Policy encouraged home gardens and smallholder production as a means of addressing food security. Since the release of the White paper on Agriculture, the Marketing of Agricultural Products, Act No. 47 of 1996, which limits intervention in agricultural markets, was signed and was discussed in the Discussion Document on Agricultural Policy. According to the act, it must be clearly demonstrable, in respect of any intervention taken, that such intervention will not adversely affect food security or employment.

In 1997, the White Paper for Social Welfare (Department of Social welfare, 1997), in which the concept of “nourishment” was included as part of the agenda for action entitled the “War on poverty”, was released. The White Paper for Social Welfare envisaged the incorporation of nutrition in all of the Department of Social Welfare’s programmes, as well as cooperation with other departments in order to improve (specifically) household food security and the provisioning of food aid during national disasters. Household food security was defined as “access by a household to enough food for active and healthy lives”. The White Paper for Social Welfare further distinguished between acute (transitory and sudden) and chronic (long-term) food insecurity.

The South African government committed itself to the stipulations of the Rome Declaration on World Food Security (United Nations Food and Agricultural Organisation, 1996). In broad terms, the Declaration promoted the optimal allocation of natural resources and the efficient use of public and private-sector resources to achieve global food security. The government

further committed itself to the creation of an enabling political, social, and economic environment and to the implementation of policies to eradicate poverty. It pledged to ensure that technology development, farm management, trade and growth policies, as well as distribution systems, were conducive to food security. As a response to the Rome Declaration, the government appointed the Food Security Working Group to investigate options for the achievement of food security in South Africa. The resulting output, namely the Discussion Document on Food Security Policy (Food Security Working Group, 1997), identified the following interventions:

- agriculture and land reform (improving the opportunities of disadvantaged groups for commercial and subsistence agriculture);
- food trade (exporting, preventing unfair trade, investigating the possible effects of liberalisation, etc.);
- income enhancement and diversification (income generation, access to finance, public works, etc.);
- social security and welfare services (welfare and social security spending, targeted food subsidies, reinvestigating zero VAT on certain products, etc.);
- disaster mitigation (sustainable agriculture, public works during problematic times, and encouraging drought-resistant crops); and
- food consumption and nutrition (access to information and education, etc.).

The document also recommended the coordination of food security programmes and cooperation amongst various sectors.

The above-mentioned recommendations relating to the coordination of programmes and cooperation between the various sectors were finally incorporated into policy in the form of the Integrated Food Security Strategy (Department of Agriculture, 2002). The strategy amalgamated previous policies and programmes by various government departments into a single, integrated, cross-departmental strategy. The strategy defines food security as “physical, social, and economic access to sufficient, safe, and nutritious food by all South Africans at all times to meet their dietary and food preferences for an active and healthy life”. The differentiation between national and household food-security, first particularised in the White Paper on Agriculture, was also incorporated. The South African challenges concerning food security were identified as: inadequate safety nets, weak support networks and disaster



management systems, inadequate and unstable household food production, a lack of purchasing power, and poor nutritional status. In order to meet these challenges, the strategic objectives of the Integrated Food Security Strategy were as follows: to improve household food production, trade, and distribution; to improve income-generating and job-creating opportunities; to improve nutrition and food safety; and to increase safety nets and food emergency management systems.

What seems evident from the above policy assessment is that UA is commonly associated with food security mechanisms. Yet very little evidence exists regarding the actual role played by UA in this respect.

## **5. A biographical profile of UA practitioners**

This section profiles the following aspects of UA practitioners and households whose members include UA practitioners:

- Gender
- The number of household members who are involved
- Age
- Levels of education
- Household size
- Number of years of involvement in UA
- Type of UA involvement

### **5.1 Gender of UA practitioners**

The overall gender profile of households does not reflect any significant gender-related differences amongst households, and more or less represents the gender composition in South Africa. Overall, 50.9% of household members were female and 41.9% were male. There were also no significant differences between the four centres although the highest female percentage was recorded in Mangaung (53.3%), while the highest male percentage was recorded in Johannesburg (53%). In respect of the respondents, 52.2% were male and 47.8% were female .

The overall involvement of household members displays a moderate bias towards male involvement, with 52.2% of household members involved in UA being male and 47.8% being

female. There are also interesting differences between the four areas, as well as between the types of involvement:

- Durban has the lowest percentage of male UA practitioners (45%). This can probably be attributed to the fact that the communal garden approach has been institutionalised in this area (see paper 1).
- The highest percentage of males involved in UA was reported for Johannesburg where 78% of the UA practitioners were male.

The role of gender will again be considered in this report, in respect of other aspects that are analysed later (for example income and productivity).

## **5.2 Involvement of household members in UA activities**

On average, 27.9% of household members are involved in UA activities. The highest percentage was recorded in Mangaung, where just over 30% of household members were involved in UA. The lowest percentage was recorded in Durban (23.8%).

## **5.3 Age of UA practitioners**

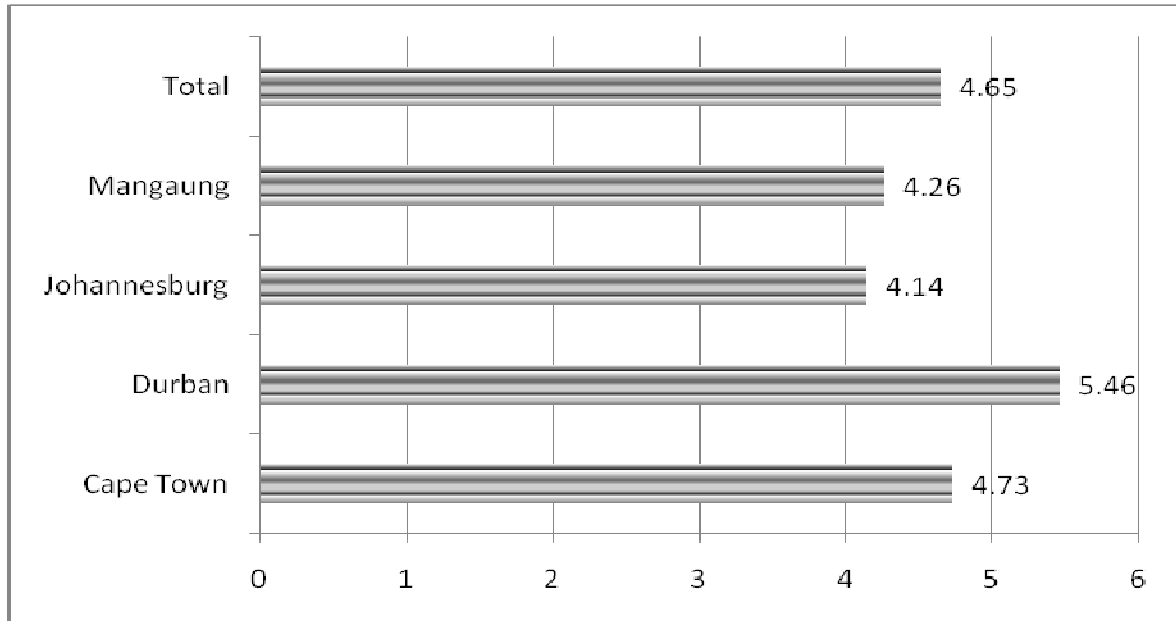
The average age of all the household members was 30.6, years, while the average age of the UA practitioners was 51.5 years. The highest average age of UA practitioners was recorded for UA practitioners in Durban – namely 55.0 years, compared with 52.7 in Bloemfontein, 51.6 in Cape Town and 46.6 in Johannesburg. This phenomenon regarding the involvement of older people in UA activities have been noted by other researchers (Thornton, 2008). However, it is usually attributed to generational factors, as well as the fact that younger people are not interested in UA. Although this might well be true, the fact that older people have easier access to social grants as a source of income should not be ignored (see Section 6.3.1). In other words, it is not necessarily age *per se* that plays a role, but rather the access to a social grant (usually through an old age pension) which provides cash for inputs.

## **5.4 Levels of education**

In respect of the level of education, just over 20% of the household members had at least a Grade 12 certificate. The highest percentage was recorded for Durban, where nearly 27% of household members had a Grade 12 certificate. Only 2.2% of UA practitioners had degrees. In respect of UA practitioners within the households, only 10% had Grade 12 certificates, while 3.3% held degrees.

## 5.5 Household size

Paper 4 has already pointed out that households who practise UA are, on average, larger than non-UA households. Figure 5.1 provides an overview in this respect.



**Figure 5.1: Average household size per location, 2008**

The average household size was recorded at 4.75, which exceeds the national average by almost one person per household, thus confirming that UA is practised by larger households – which are usually poorer, with extended families.

## 5.6 Number of years of involvement in UA

The focus will now shift to an assessment of the number of years during which UA practitioners have been involved in farming activities (see Table 5.1).

**Table 5.1: Number of years of involvement in UA, 2008**

Number of years involved	Cape Town	Durban	Johannesburg	Mangaung
<1 year	15.3	6.3	15.1	9.8
1-5 years	36.9	34.1	35.7	28.5
6-10 years	19.8	21.4	27.8	21.1
11-15 years	11.7	16.7	9.5	17.9
16-20 years	3.6	4.0	7.9	9.8
>20 years	12.6	17.5	4.0	13.0

The above table suggests that on average, UA practitioners have been involved in agricultural activities for 8.2 years. The longest period of involvement was recorded for Mangaung,

where UA practitioners had been involved in UA for 9.2 years (on average). Interestingly enough, females reported a slightly longer period of involvement –10.3 years on average, compared with the 8.1 years reported by males. This confirms the ability of UA to absorb females as well. In view of current programmes supporting UA activities, there seem to be two groups of UA practitioners involved. Firstly, those who have been involved for less than five years are probably beneficiaries of the current programmes of various spheres of government that are aimed at supporting UA (just below 40%). The other group consists of individuals who have been involved for longer than five years, probably comprising a group of people who were previously involved in UA without any significant support – but who may also have benefited from support in the past five years.

### 5.7 Type of UA involvement

An overview of the biographical attributes of UA practitioners has been provided in the above paragraphs. In this section, the focus shifts towards an assessment of the different types of UA activities that are taking place (see Table 5.2). It should be noted that the distribution between these different types of UA, as reflected in the table below, is not necessarily an indication of how the activities are distributed in reality, as a convenience sampling method was followed. As a result of the method used, it was probably easier to trace crop growers, as opposed to those involved in animal husbandry.

**Table 5.2: The distribution of types of UA activities per urban area in South Africa, 2008**

Type of UA activity	Cape Town		Durban		Johannesburg		Mangaung		Total	
	N	%	n	%	n	%	n	%	n	%
Growing crops in the backyard	48	49.5	61	60.4	71	72.4	55	55.6	235	59.5
Growing crops on communal/other land	29	29.9	40	39.6	20	20.4	19	19.2	108	27.3
Animal husbandry	20	20.6	0	0.0	7	7.1	20	20.2	47	11.9
Backyard crops and animal husbandry	0	0.0	0	0.0	0	0.0	5	5.1	5	1.3
Total	97	100.0	101	100.0	98	100.0	99	100.0	395	100.0

A number of points should be noted from the outset:

- Growing crops in the backyard seems to be the most prevalent manner in which UA is practised, as approximately 60% of all the interviewees fell into this category. The highest percentage in this respect was recorded in Johannesburg, where 72.4% of the sampled population reported that they were growing crops in their backyards.

- Just over one quarter of the interviewees were growing crops on communal land, or land other than their back yards.
- Approximately 13% of the UA practitioners were involved in some form of animal husbandry.

Paper One, which dealt with, the institutional responses in South Africa, noted that a large number of the UA initiatives are focused on communal gardens, while the largest percentage of UA practitioners are actually involved in back-yard gardening (at least in terms of the sample). A few other aspects should also be made noted in respect of the biographical attributes:

- A much higher percentage of males are engaged in animal husbandry – 88% of all interviewees involved in this form of UA are male.
- The longest history of involvement in farming activities was recorded for UA practitioners who were growing their own crops in their backyards – on average these practitioners had been involved for 8.9 years. The comparative figures for crop production on communal land and animal husbandry were 8.1 and 7.0 years respectively.

## **5.8 Synthesis**

The evidence above suggests that UA is practised by poorly-skilled, older and probably poor households (in view of the composition of the larger households). The question that now arises is: to what degree do these households succeed in using UA to address their poverty and ensure food security?

## **6. Production and production processes**

This section considers production-related aspects. Firstly, an overview of production processes will be provided, followed by an overview of production and input costs for the various types of UA activities.

### **6.1 An overview of production**

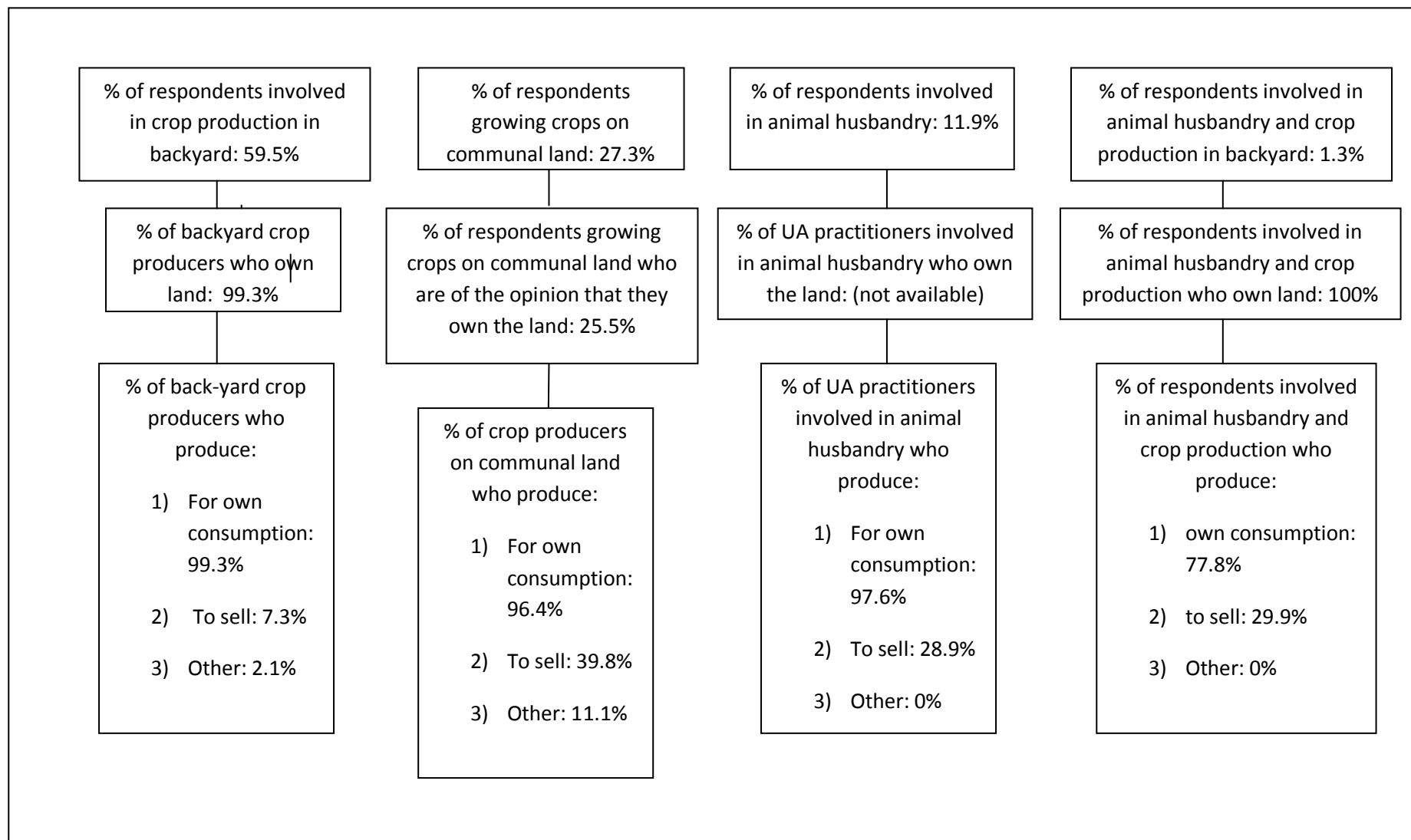
In Section 5.7, a broad overview of the main UA activities undertaken by UA practitioners was provided. This section starts with a diagrammatic representation of production (see

Figure 6.1)<sup>2</sup>. The figure differentiates between the different types of UA activities and land ownership,<sup>3</sup> and also indicates whether production is carried out for own consumption or for the purpose of selling produce.

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<sup>2</sup> It should be noted that a respondent who engages in UA for the purposes of own consumption might also sell produce: thus, the percentages for own consumption and for selling need not correspond.

<sup>3</sup> The table suggests that some UA practitioners are under the impression that they own communal land. Although this may seem contradictory, it is not really strange that some respondents feel that the communal land actually belongs to them.



**Figure 6.1: An overview of UA production, 2008**

A number of points should be noted in respect of the production overview in Figure 6.1:

- The highest percentage of UA practitioners who sold their produce /animals for cash was recorded among those practitioners who produced crops on communal land. Nearly 40% of the farmers in this group sold their produce for cash – although the largest percentage of these respondents also used their produce for own consumption.
- Just below 30% of the owners of livestock sold their animals for cash.
- The lowest percentage of UA practitioners who sold produce for cash was recorded amongst the back-yard growers, of whom only about 7% sold some of their produce for cash.
- Land ownership is also not a prerequisite for production purposes. The majority of respondents who sold produce for cash practised farming on communal land.

The above evidence suggests that, although UA plays a specific role in providing food for consumption by the UA practitioners, a significant number of these practitioners do, in fact, produce crops or breed animals in order to sell them. Furthermore, land ownership does not seem to be a prerequisite for production in this environment, which means that the title costs need not be carried. At the same time, it should be borne in mind that land disputes might well come into play in respect of the issue surrounding rights to communal land.

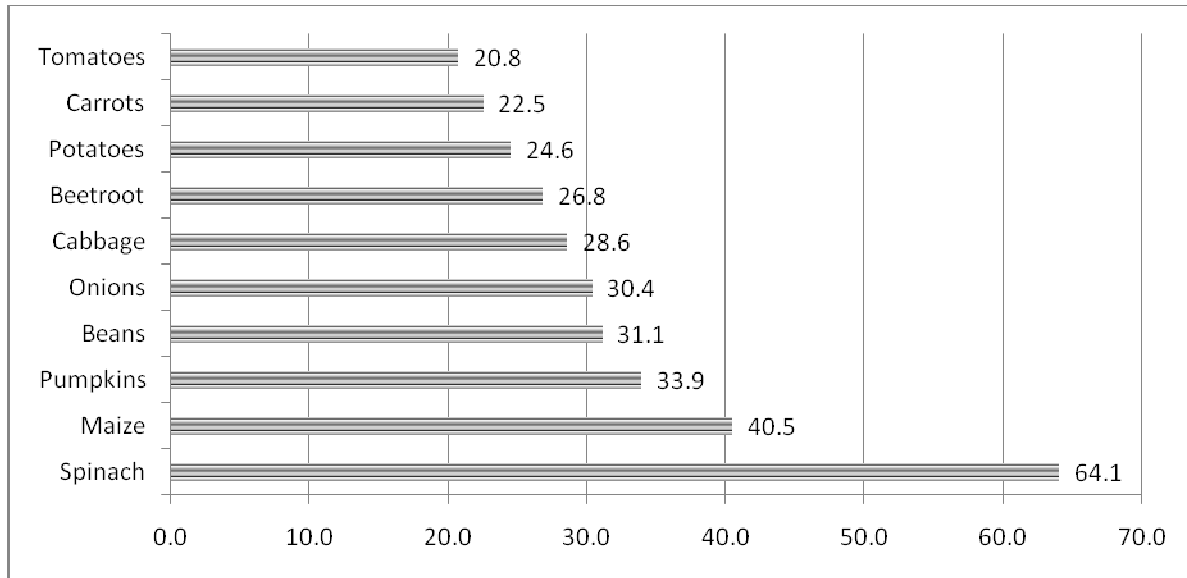
## **6.2 Production**

This section provides a profile of the types of crops produced, the animals kept and the value of these UA products.

### **6.2.1 Types of crops produced**

As already noted, 88.1% of all UA practitioners were involved in some form of crop production. Figure 6.2 provides an overview of the ten most prominent crops produced by UA practitioners in the four urban areas under consideration.





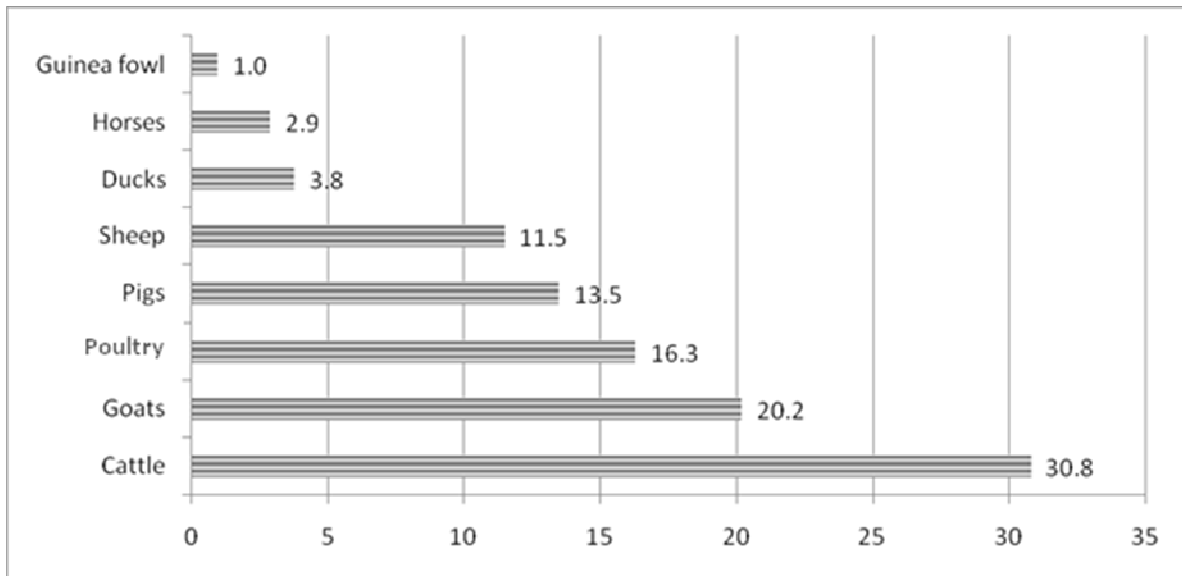
**Figure 6.2: The ten most commonly produced crops in UA activities, 2008**

From the evidence above, spinach seems to be the most prominent product, since nearly two-thirds of the crop-growing UA practitioners produced spinach. Maize is in second place, with 40.5% of all practitioners growing this crop. Pumpkin production is the third most prominent crop-growing activity (33.9%). The fact that these three products are cultivated by such a large component of the UA practitioners suggests that production for own consumption is very prominent, since these are popular amongst lower-income households as food for consumption.

In respect of Rand value, spinach accounted for about 27% of the total value of production, was followed by pumpkins (13%), maize (11%) and beetroot (8%).

### **6.2.2 Animal husbandry**

Broadly, this section provides an overview of the types of animals kept and of the number sold per annum. Figure 6.3 provides an indication of the types of animals that are kept.



**Figure 6.3: Types of animals kept by UA practitioners, 2008**

Cattle comprised the most prominent type of animal kept by UA practitioners involved in UA, accounting for nearly one-third of all animals that were kept. Cattle breeding was also more prominent in Bloemfontein, where 40% of the animals were cattle. Goats (20.2%), poultry (14.4%), pigs (13.5%) and sheep (11.5%) also featured prominently. Other animals included ducks, horses and guinea fowl.

### **6.2.3 The value of crop production**

In Section 5 the income obtained from UA and other activities was considered. This section focuses on the production value of crops. Methodologically, this was determined by recording the extent of production (for example, in terms of bags of maize) and then multiplying this by the market value in March 2009. It should be noted that this is not an exact method, and that miscalculations may potentially occur. However, it is important to gain some form of insight in this respect. A number of key points should be made with regard to this aspect:

- The overall average value of production for the last season was calculated at R646 per household.
- If this amount is added to the average income (see Section 5) and then expressed in terms of a percentage, this means that, on average, UA activities involving crop production add 2% to household income.
- The prices that were determined in accordance with the above-mentioned method were calculated at market value and not in terms of retail prices, while the cost of

transportation to retail chains was also not considered. If these factors were to be taken into account, the actual percentage might well amount to double the figure indicated.

### 6.3 Inputs

The above section focused on production and production values. However, in the paper dealing with the institutional analysis in eThekweni (Durban), some comments were made in respect of the “over subsidisation” of the UA activities. Against this background, Section 6.3 starts off with a discussion of the sources of inputs (for crop producers only), which is then followed by a discussion of the costs of inputs.

#### 6.3.1 Origins of inputs

Table 6.1 summarises the origins of funding for inputs for the production of crops.

**Table 6.1: The sources of funding for inputs, 2008**

Another job	37.0
A state pension / grant	34.8
The profits from the sale of produce	12.8
Family	7.4
Sponsoring	4.9
Other	3.1
Total	100.0

The largest percentage of respondents funded their UA activities by means of another job (37%), or by accessing some form of state pension / grant (34.8%). This lends credibility to the notion of an integrated approach to ensuring livelihoods for the poor. Despite the high level of subsidisation noted in eThekweni, just under 5% of the households practising UA were sponsored in respect of their inputs.

Of note is the fact that 12.8% of the participating households reported that their inputs were generated by what they sold. In view of the fact that 20.8% of households receive income from UA crop production, this means that about 60% of UA practitioners who receive income from UA activities actually do so in a financially viable manner and that they thus do not need to access any other source to ensure inputs.

### 6.3.2 Cost of inputs versus production value

A profile of production was provided in section 6.1. In the present section, input costs and production costs are compared (see Table 6.2). It should be noted that this was made without calculating the cost of water; but the responses of UA practitioners with regard to a wide range of possible inputs, for example seeds and pesticides, are included.

**Table 6.2: Input cost versus production value per household, 2008**

Area	Input cost (R)	Production value (R)	Input: output ratio
Cape Town	81.60	401	1:4.9
Durban	193.23	1272	1:6.6
Johannesburg	67.55	515	1:7.6
Bloemfontein	69.49	376	1.5.4
Total	103.66	646	1:6.2

The highest input costs and production values were recorded in Durban, where the average input costs amounted to R193, versus the average production value of R1272. However, these figures do not represent the highest input: output ratio. In Johannesburg, the input costs of R67 generated a production value of R515, which means that every R1 of input generated R7.60 in production value. The average ratio was 1:6.2. Cape Town had the lowest ratio at 1:4.9.

### 6.3.3 Access to water

The lack of access to water for crop production is a major obstacle to many UA activities. Although this is less of a problem in Durban – where the average annual rainfall is high – the need to access water cannot simply be ignored. Table 6.3 below provides an overview of water access.

**Table 6.3: Source of water access for UA practitioners, 2008**

Source of water	n	%
Tap (municipality)	282	81.7
River	21	6.1
Grey water	13	3.8
Borehole	10	2.9
Dam	1	0.3
Other	18	5.2
Total	345	100

The largest percentage (81.7%) of UA practitioners accessed municipal water for their UA activities. River water was used by the second largest component (6.1%), while grey water was used by 3.8% of the respondents. Boreholes were used by 2.9% of the practitioners while 0.3% used water from dams.

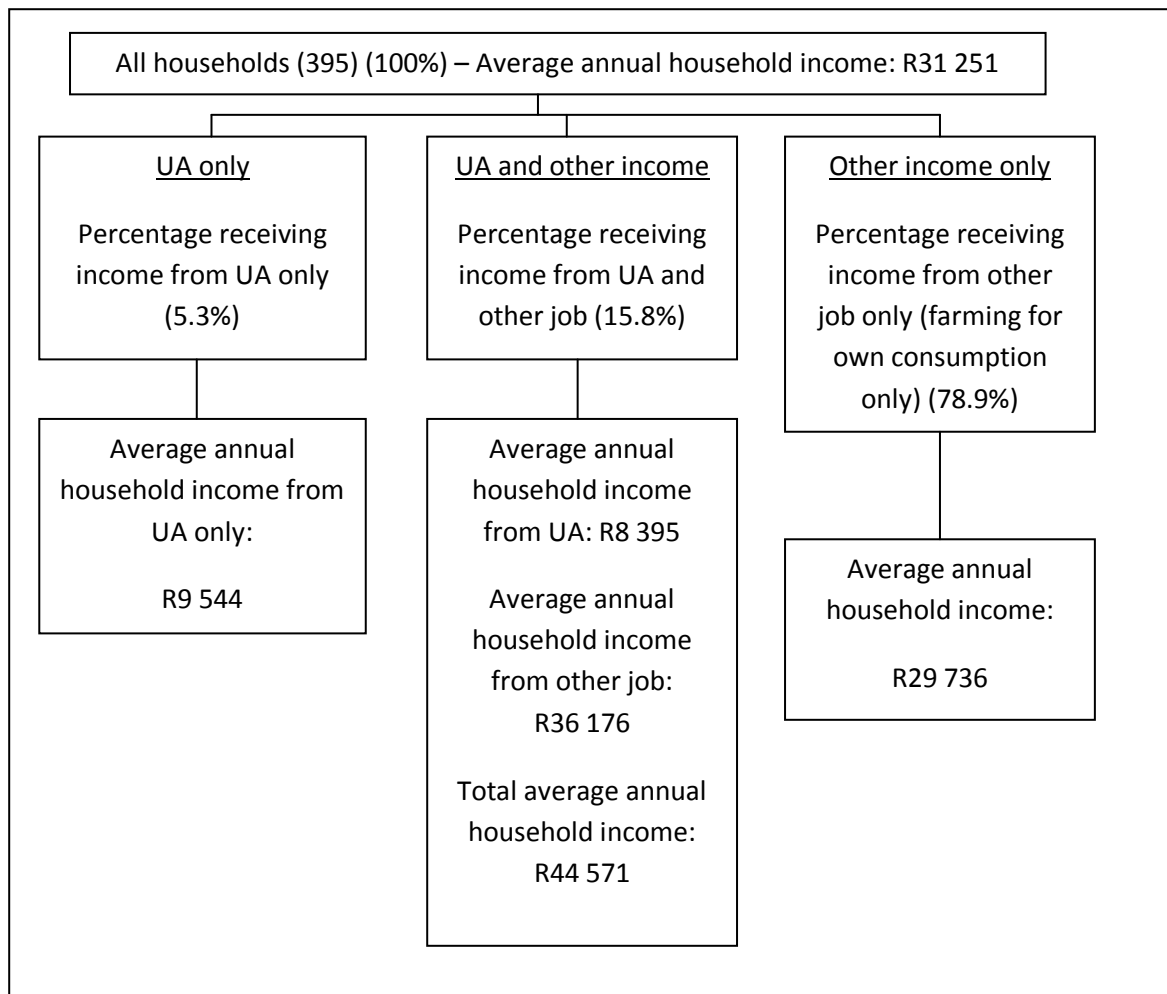
In view of the high percentage of respondents who reported using municipal water, the question arises as to whether respondents paid for the water. The results show that approximately 52% of the respondents who accessed municipal water indicated that they were paying for it.

## **7. Income**

In this section, the emphasis shifts from production to the annual household income received from UA activities and other sources. A broad overview of annual household income will firstly be provided. As already noted, household income figures do not always compromise the most reliable data. However, the import issue in this section is not necessarily the income *per se*, but rather the relevant trends and their relationships with other aspects.

### **7.1 An overview of annual household income**

This section provides an overview of income trends. Figure 7.1 provides a schematic indication of the income obtained for the various sources of income. Whenever income is considered, a distinction is will be made in respect of household income and income generated through UA.



**Figure 7.1: A profile of annual household income per source of income, 2008**

A number of points should be noted in this respect:

- The above income profile illustrates the principle of multiple incomes, with UA being one of a range of strategies followed by households to earn an income.
- Just over 5% of the households received an income from their UA activities only.
- The average annual earnings of those households whose only income was generated by means of UA activities amounted to R9 544.
- With regard to households receiving income from UA and other activities, the average annual income from farming was R8 395. This amounts to is 12% less than the R9 544 average annual income generated by households who were exclusively dependent on farming as a source of income.
- The average income of households generating income from farming and other activities was R44 571. UA activities accounted for nearly 19% of this income.
- If all households deriving income from UA (those households engaged in UA activities only, as well as those earning an income through UA activities and other

means) are taken into consideration, 25.9% of the income originated from UA involvement.

- The average income for households who only obtained income from other sources, and who participated in UA on an own-consumption basis, was R29 736, compared with the average income for the whole sample of (R31 251).
- If the above amounts are projected to include all households, UA activities in 2008 added approximately 5% to household income (excluding the value of own consumption). As already noted in Section 6 the overall value of production was estimated at R646. If this amount is added to income, it can be concluded that about 7% of income is attributable to UA earnings.

The question that arises at this point is: what difference do the above income figures make in terms of addressing the MDGs? Considering the average household size, as well as the average income, the following pertinent results should be noted:

- With regard to the earnings obtained by those households whose only source of income is UA, each household member receives 67% of a USD<sup>4</sup> per day (at current value). The contribution of UA in respect of addressing poverty should be noted, as it could be argued that, in the absence of UA activities, the per capita income might have been very low.
- Regarding those households accessing income from both UA and other sources, the figures suggest that UA increases their income from 2.5 USD per day to 3.1 USD per day. If a Rand/USD exchange rate of 10 is used UA production ensures that the USD per capita income is raised from 2.1 USD per person per day to 2.7 USD per person per day.
- Those households who receive income from other sources only, and therefore produce only for own consumption, have a USD income of 2.08 USD per person per day. If the own production from crops and animal husbandry is added, then this amounts to an additional 0.05 USD per person per day.

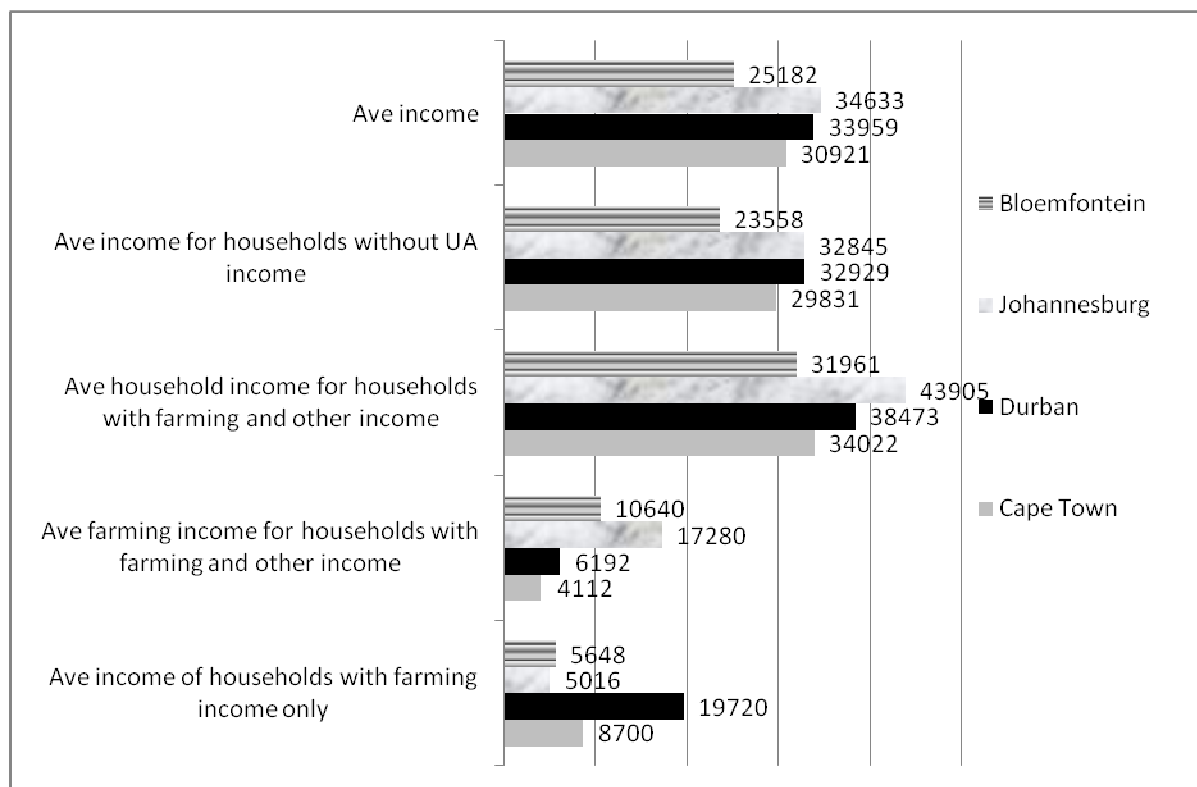
The overall contribution of UA as reflected in the above figures, although marginally small, is significant.

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<sup>4</sup> The volatility of the Rand/USD exchange rate should be noted as a problem in carrying out this calculation. This percentage was calculated at an exchange rate of R8.50 per USD. The exchange rate on 15 June 2009 was R8.09 per USD, while during March 2009 it was R10 per USD.

## 7.2 Location and income

In view of the overall income profile, the question that needs to be answered is whether there were any significant locational differences. In Section 2, an overview was provided of the institutional responses with regard to UA. Durban and Cape Town were identified as the two urban areas with the most prominent UA policies and institutional support programmes. Figure 7.2 provides a profile of the various income levels for the four locations considered in this report.



**Figure 7.2: Income profile per location, 2008**

A number of key points should be made in respect of the above table:

- The highest total annual income was recorded for Johannesburg (R34 633), followed by Durban (R33 959), Cape Town (R30 921) and Bloemfontein (R25 182).
- The highest average income from farming for households with only a farming income was recorded in Durban (R19 720). This is probably a reflection of the high summer rainfall in Durban, although the small number of respondents in this category may have comprised a methodological constraint.



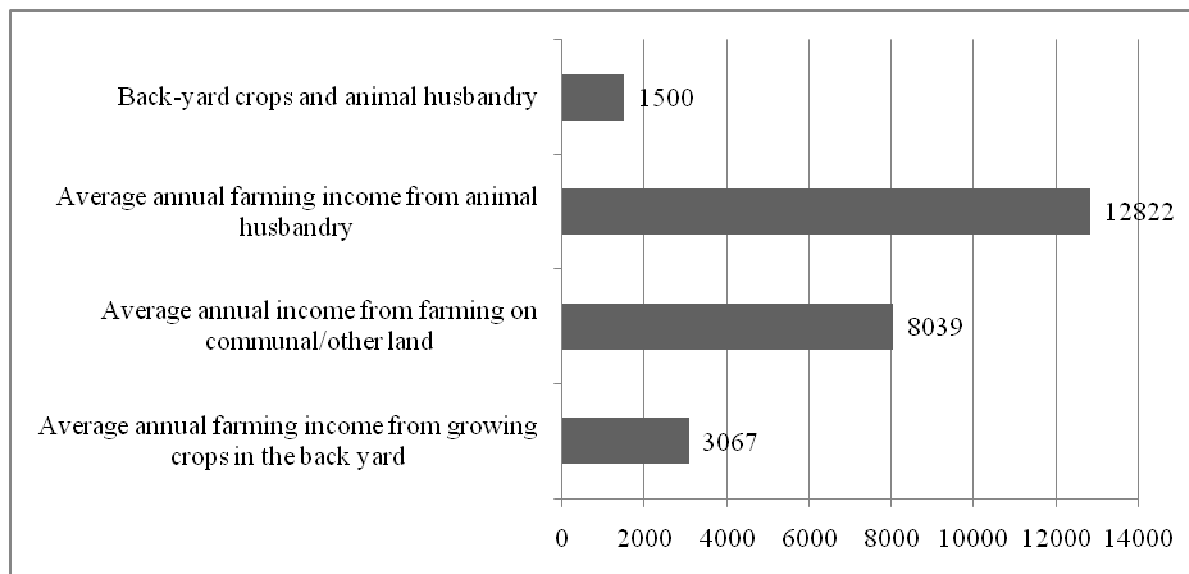
- The second highest income from UA activities was recorded in Johannesburg, in that the average income for households earning both UA income and other income amounted to R17 280.
- More importantly: if UA income is considered as a percentage of the total household income for households receiving UA income, it can be seen that the highest percentage of UA income was recorded for Johannesburg (32.7%), followed by Durban (30.8%), Cape Town (29.4%) and Bloemfontein (15.5%).
- If these percentages are considered in terms of the total income, Johannesburg displayed the highest percentage of UA income as a percentage of total income (excluding the value of own production) (7.8%). Durban was in second place, with 7%, followed by Cape Town (5.8%) and Bloemfontein (2.3%).

Considering the above profile of income in respect of the various locations, the following points should be noted in respect of the MDG targets:

- UA income in Durban accounts for up to 1.2 USD per person per day – income which would not have been possible without the institutional support for UA.
- UA income generated by households in Johannesburg who also have other income accounts for as much as 1.6 USD per person per day.

### **7.3 Types of UA activities and annual household income**

The aim of this section is to determine whether there are differences amongst the various UA activities in terms of annual household income. Unfortunately, it was only possible to conduct this assessment by taking into account the annual household income profiles of people who indicated that they were the heads of households – and also only for those households who indicated that they derived income from UA activities (see Figure 7.3).

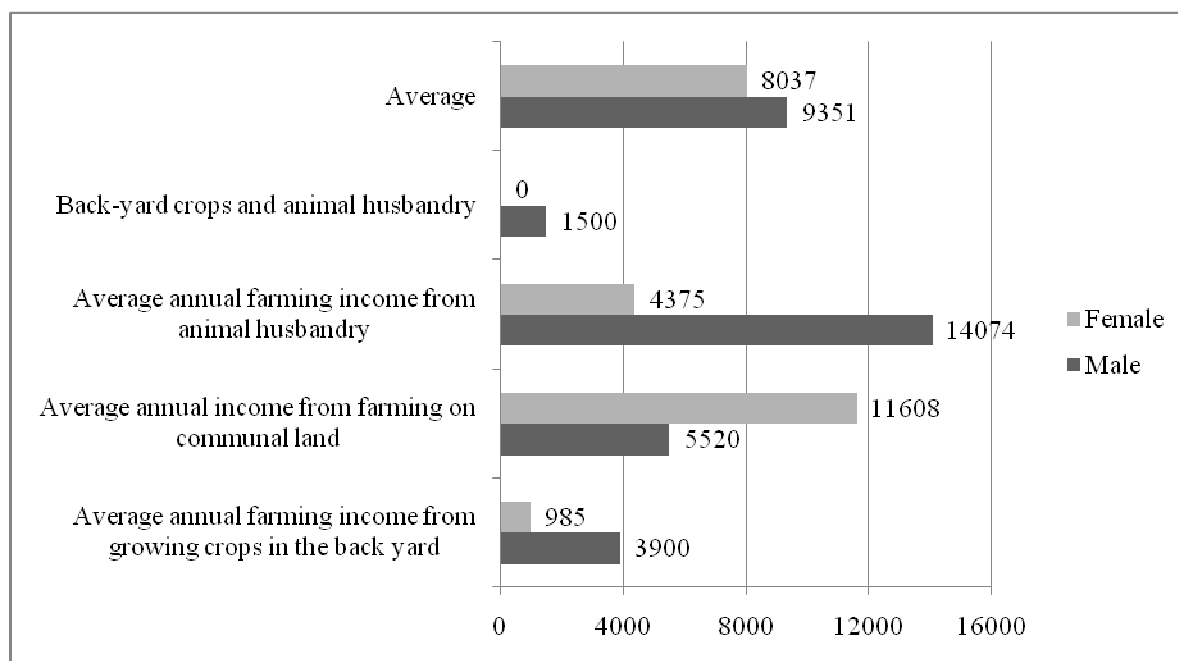


**Figure 7.3: A comparison of incomes for the various types of UA activities (for households who reported selling produce), 2008**

The above data suggest that the highest annual income is derived from animal husbandry – although only about 12% of the sample reported having received income from this source. On average, animal husbandry provides households with an income of R12 800 per annum, compared with the R8 000 earned for crop farming on communal / other land, and R3 000 for crop farming in the back yard.

#### **7.4 Gender and household income**

A number of interesting observations can be made concerning gender-related differences with regard to income. A summary is provided in Figure 7.4.



**Figure 7.4: Income per gender and type of UA activity, 2009**

Currently (2009), the annual income received by males from UA activities exceeds the earnings of females by 16%. Interestingly enough, the income received by males in respect of the non-UA earnings also exceeds that of females by 12%. Although the annual UA income of males is considerably higher in the cases of animal husbandry and crops produced in the back yard, females receive a considerably higher annual income from farming on communal or other land. This may possibly be attributed to the fact that many of the communal projects specifically target females.

The limited difference between males and females in respect of income and the fact that females receive a considerably higher income from crop production suggest that UA does not perpetuate the gender-related differences that already exist, and could potentially even contribute towards addressing the imbalances relating to the income of females.

### **7.5 Age of individuals involved in UA and income from UA**

Those involved in UA were divided into four roughly equal categories according to their age; and this information was analysed in terms of the household income from UA. The results are reflected in Table 7.1 below.

**Table 7.1: Income from UA according to the age of those involved in UA, 2008**

Age	Mean income	Number of respondents
<42 years	8387.41	27
42-52 years	8800.00	20
53-61 years	16485.52	29
>61 years	8913.57	29

The differences between three of the four broad age categories, in terms of the average household income for UA, appear to be minimal (with a difference of only R526.16 between the highest and lowest categories). However, practitioners in the third category, representing those aged between 53 and 61 years, were earning nearly twice as much (R16 485.52) as those in the other three categories for their UA activities. No specific explanation could be found for this, other than the fact that such households usually experience the highest pressure on their incomes.

#### **7.6 Education levels of individuals involved in UA and income from UA**

The education levels of those involved in UA were divided into four roughly equal categories and compared in terms of the household income from UA. The results are reflected in Table 7.2 below.

**Table 7.2: Income from UA according to the education of those involved in UA, 2008**

Grade	Mean income	Number of respondents
<Grade 6	5272.08	24
Grade 6 to Grade 7	13138.18	22
Grade 8 to Grade 10	11170.80	25
>Grade 10	12830.34	29

Concerning the three highest education categories, the differences between the incomes received through UA activities are minimal, though this does not seem to point to any trend (i.e., neither a higher nor a lower level of education correlates with higher income). However, Grade 6 appears to be a major point of disjunction, since those who attended school up to Grade 6 or further earn more than twice as much from their UA activities as those who did not complete Grade 6.

## 7.7 Number of years of involvement in UA

This section broadly considers the question as to whether there are any differences in respect of income that correlate with the number of years during which those UA practitioners who receive an income from UA activities have been involved in farming (see Table 7.3).

**Table 7.3: Income according to the number of years of involvement in UA, 2008 (only applicable to those receiving income from UA)**

Years	Mean income	Number of respondents
<1 year	3492.86	7
1-5 years	6724.32	37
6-10 years	10940.42	24
11-15 years	33600.00	3
16-20 years	1933.33	3
>20 years	8450.00	10

The evidence from the above table suggests that there is a steady increase in the difference between the income earned from UA activities by UA practitioners who have been involved in UA for less than a year, and the income earned by those who have been involved for between 11 and 15 years. UA practitioners who have been involved for less than one year obtain an average income of R3 492 per annum for their UA activities. In comparison, UA practitioners who have been involved for 1-5 years have an average annual income of R6 724, while those involved for 6-10 years obtain an income of R10 940 and those involved for 11-15 years earn an average income of R33 600. What is significant is that those individuals who have been involved for longer than 15 years have substantially lower incomes.

## 8. Expenditure

An assessment of expenditure is especially important in order to determine the percentage spent on food (see Table 8.1).

**Table 8.1: Household expenditure for UA practitioners per type of UA activity, 2008**

Item	Rand value				Percentages			
	Growing crops in the back yard	Growing crops on communal /other land	Animal husbandry	Total	Growing crops in the back yard	Growing crops on communal /other land	Animal husbandry	Total
Housing: rental	16.77	82.00	22.87	35.12	0.8	3.4	0.8	1.6
Housing: bond	58.38	86.32	70.21	66.69	2.8	3.6	2.5	2.9
Clothing	293.19	300.65	358.98	303.90	14.3	12.5	12.5	13.4
Education: after-care	1.28	4.17	0.00	1.90	0.1	0.2	0.0	0.1
Education: pre-school	21.13	39.86	57.45	30.30	1.0	1.7	2.0	1.3
Education: primary school	43.80	39.58	28.72	40.68	2.1	1.6	1.0	1.8
Education: secondary school	48.32	54.32	29.36	50.89	2.4	2.3	1.0	2.3
Education: tertiary training	75.74	58.41	0.00	61.03	3.7	2.4	0.0	2.7
Rates	15.13	24.63	4.26	16.24	0.7	1.0	0.1	0.7
Water and E	161.66	223.17	183.91	181.23	7.9	9.3	6.4	8.0
Loan repayment	34.42	78.26	25.53	46.68	1.7	3.3	0.9	2.1
Health care	31.31	52.31	56.81	42.12	1.5	2.2	2.0	1.9
Paraffin/fuel	52.57	37.74	152.16	61.47	2.6	1.6	5.3	2.7
Alcohol consumption	49.28	51.35	66.81	51.69	2.4	2.1	2.3	2.3
Smoking	26.23	26.13	25.76	25.95	1.3	1.1	0.9	1.1
Food	660.04	810.28	835.11	726.01	32.2	33.8	29.2	32.1
Transport	241.26	203.46	403.40	251.13	11.8	8.5	14.1	11.1
Telephone	90.43	94.62	171.09	101.88	4.4	3.9	6.0	4.5
Support of family outside household	91.62	95.98	217.02	107.33	4.5	4.0	7.6	4.7
Entertainment	37.66	36.11	153.19	52.41	1.8	1.5	5.4	2.3
Rental of land	0.00	0.84	0.00	7.16	0.0	0.0	0.0	0.3
Total	2050.23	2400.18	2862.63	2261.81	100.0	100.0	100.0	100.0

The percentage of expenditure on food varies between 29.2% for households involved in animal husbandry and 33.8% for households growing crops on communal land. Households who grow crops in their back yards spend 32.2% on food. The overall percentage is 32.1%. This percentage suggests that there are no serious problems in respect of hunger. It is only when the relevant percentages rise above 40% – and, especially, above 50% – that they become indicators of serious problems relating to food security. However, if the value of UA income and production is taken into consideration (between 5% and 7% of income), the value of UA activities probably prevents the percentages from exceeding 40%. Compared with the figures obtained in recent studies, the existing percentages are not very different from those

pertaining to other urban dwellers; but they are significantly higher than the 25% recorded for land-reform beneficiaries.

The next four sections now turn to the influence of various factors on the percentage of household expenditure devoted to food.

### 8.1 Location and food expenditure

In Table 8.2 below, the four locations sampled are compared in terms of the share of total expenditure devoted to food.

**Table 8.2: Percentage of household expenditure devoted to food by location, 2008**

Location	Percentage	Number of respondents
Cape Town	33.5	97
Durban	35.1	100
Johannesburg	32.1	97
Mangaung	27.9	99

Mangaung displayed the lowest share of household expenditure devoted to food purchases (27.9%). This was well below the second lowest share, namely that of Johannesburg (32.1%), entailing a difference of 4.2 percentage points. Durban displayed the highest share of expenditure devoted to food.

### 8.2 Total household income and food expenditure

As indicated in Table 8.3 below, the total household income of the respondents was divided into four roughly equal categories and compared with the percentage of the total household expenditure devoted to food.

**Table 8.3: Percentage of household expenditure devoted to food by household income, 2008**

Income	Average total expenditure	Average expenditure on food	Percentage of expenditure on food	Number of respondents
<R11 280	1992.97	675.07	33.9	75
R11 280 – R20 999	2107.96	635.05	30.1	91
R21 000 – R37 779	1982.19	673.88	30.3	84
>R37 779	3432.24	1038.69	34.0	84

In the survey, it was noted that there was a larger gap between income reported and expenditure reported in higher-income households than in the case of lower-income households. However, the average expenditure on food remained more or less constant, resulting in skewed percentages.

### 8.3 Gender of those involved in UA and food expenditure

In Table 8.4 below, the percentage of household expenditure devoted to food is analysed in terms of the gender of those involved in UA.

**Table 8.4: Percentage of household expenditure devoted to food by gender of individuals involved in UA, 2008**

Gender	Percentage	Number of respondents
Male	31.1	263
Female	32.6	241

The share of expenditure devoted to food in cases where those involved in UA are male appears to be only marginally smaller.

### 8.4 Number of years of involvement in UA and food expenditure

Table 8.5 below compares the percentages of household expenditure devoted to food, in terms of the number of years during which the individuals had been involved in UA.

**Table 8.5: Percentage of household expenditure devoted to food by period of involvement in UA, 2008**

Period of involvement	Percentage	Number of respondents
<1 year	31.5	47
1-5 years	32.3	157
6-10 years	32.4	101
11-15 years	33.8	61
16-20 years	29.5	30
>20 years	33.6	56

There is very little difference between the percentages of household expenditure devoted to food, in terms of the period of involvement of UA. Furthermore, the minor differences that were noted did not indicate any trend (i.e., the number of years of involvement did not appear to influence the share of household expenditure devoted to food).



## 9. Institutional aspects

### 9.1 Main reasons for being involved in farming / UA

The respondents were asked to specify their reasons for being involved in UA. Their responses are reflected in Table 9.1 below.

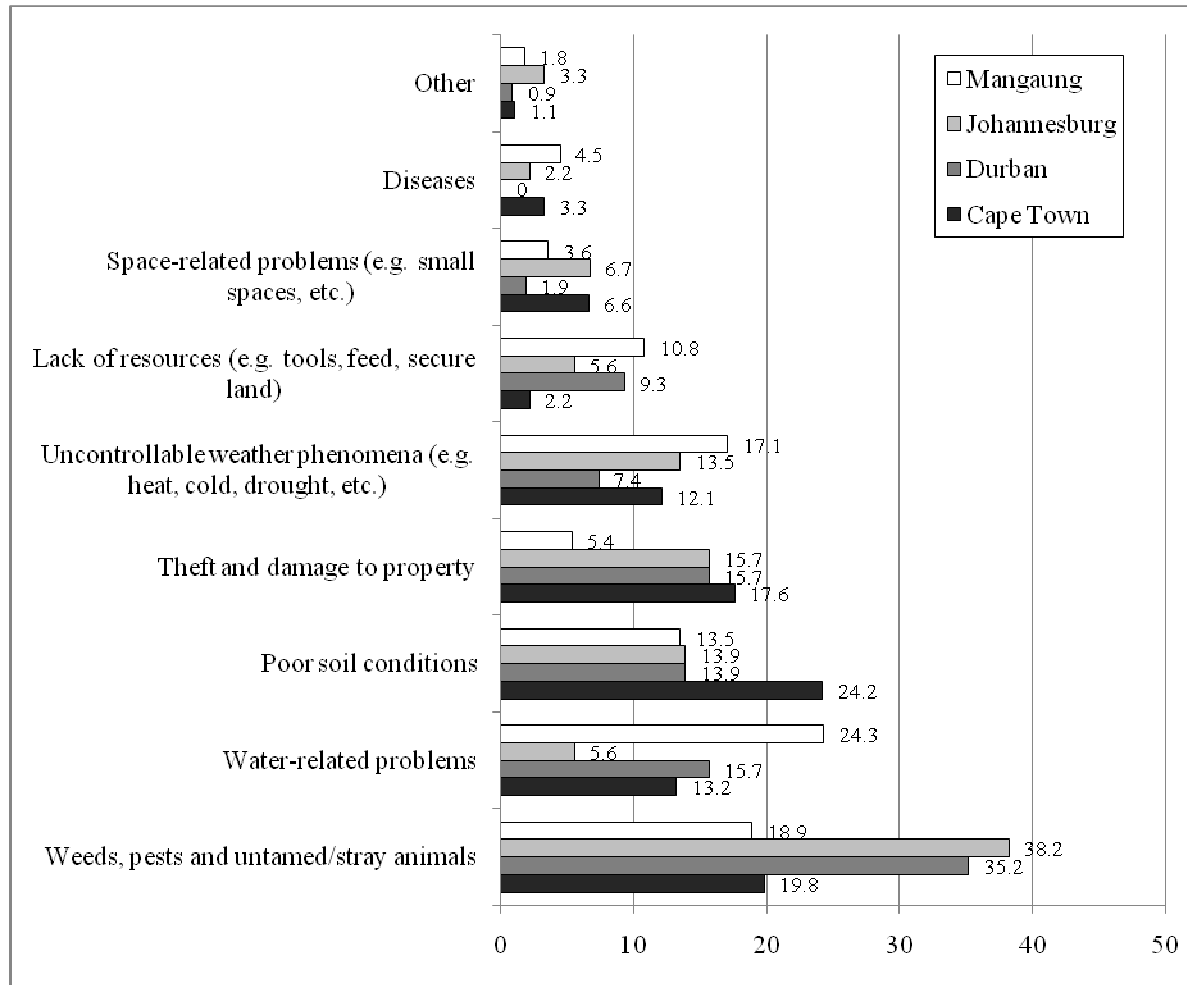
**Table 9.1: Reasons for involvement in farming / agriculture**

Reasons for involvement in UA	Total	
	n	%
Food-related reasons – UA a necessity and not a choice	203	37.2
Cost of living generally too high / extra source of income	124	22.7
Enjoy farming – UA is a tradition or hobby	100	18.3
Unemployment-related reasons	73	13.4
Health and nutritional reasons	28	5.1
Benefit to community	10	1.8
Environmentally-related reasons	8	1.5
Total	546	100.0

From the above, it is evident that most of the respondents in all the areas engaged in UA out of necessity, rather than by choice. The main reason for the involvement of respondents who engaged in UA was that they had no choice but to produce food themselves, since they experienced difficulty in accessing food from other sources (37.2%). Respondents in the necessity category specifically mentioned that food prices were too high and that they were thus constrained to produce food in order to survive. A second reason – which is related to the first – is that some respondents (22.7%) perceived UA as a means to fight poverty, or to cope with the cost of living, or in some cases, simply as an extra source of income. Thirdly, 18.3% of the respondents noted that they found UA enjoyable and that they were involved in farming out of choice. Some respondents in this category also mentioned that they had grown up on a farm, that farming was a family tradition, or that they engaged in farming as a hobby. Fourthly, 13.4% of the respondents specifically cited unemployment as a factor that constrained them to engage in UA. These unemployed respondents mostly practised UA in order to survive, but a few respondents also maintained that they engaged in farming to keep themselves occupied. Other less prominent reasons cited for involvement in UA included health reasons (5.1%); the fact that farming was seen as beneficial to the community (1.8%); and environmental concerns (1.5%).

## 9.2 The most serious problems experienced in respect of production

The three main problems experienced by respondents with regard to agriculture and production were: problems with weeds, pests and untamed animals; water-related problems; and the poor condition of agricultural soil (see Figure 9.1).



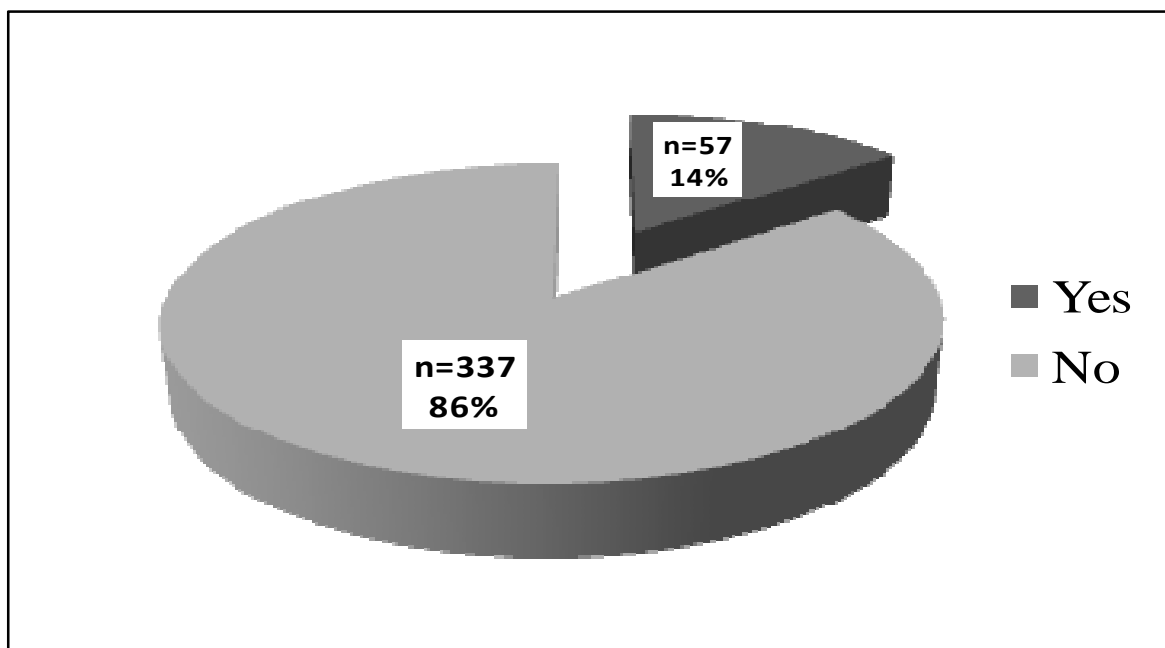
**Figure 9.1: The most serious problems experienced in respect of agriculture and production**

As indicated in Figure 9.1, there are significant differences in respect of the degree to which the respondents experienced problems in the various geographical areas. Overall, the most serious problem indicated by the respondents was that of weeds, pests and untamed animals. However, a considerably higher number of respondents in Johannesburg (38.2%) and in Cape Town (35.2%) reported experiencing problems with weeds, pests and animals than was the case in Durban (19.8%) and Mangaung (18.9%). Specific pests and animals identified as causing problems were insects, rodents, birds, domestic animals and livestock. Secondly, the lack of water, or the lack of access to water, was another major concern. It is noteworthy that

a significantly higher number of respondents in Mangaung (24.3%) indicated water-related problems as a major concern than in the case of the other cities. Thirdly, soil conditions, especially in terms of infertile soil and sandy soil, were also cited as a problem. Respondents, specifically in Cape Town (24.2%), were concerned about the poor conditions of the soil in their city. Theft and damage to property were also a matter of concern in all of the cities, albeit to a lesser degree in Mangaung (5.4%). In particular, the lack of proper fencing was mentioned as a contributing factor to the problems relating to theft and damage to property. Other problems mentioned were: uncontrollable weather conditions; the lack of resources; space-related problems; and an inability to control animal diseases.

### 9.3 Product trading on the open market

Respondents were asked whether they traded any of their products on the open market. Their responses are reflected in Figure 9.2 below.



**Figure 9.2: Trading of products on the open market**

The majority of respondents indicated that they did not sell any of their products on the open market – only 14% of the respondents did so (see Figure 9.2). The few respondents who traded on the market cited transport problems (58.33%) as the biggest obstacle encountered in respect of accessing markets. Other problems experienced with regard to accessing markets were related to markets being poor, as well as the fact that respondents felt that their products did not fetch good prices in the market (13.8%). Some of the respondents (27.78%)

mentioned that they did not experience any problems in trading at the market, and that the main advantage in this regard was the fact that customers came to them.

#### 9.4 Support required from government

Respondents were asked to indicate the type of support that they needed from local, provincial and national government. The types of support that respondents wished to receive from government are shown in Table 9.2.

**Table 9.2: Support required from government**

Type of support required	Total	
	n	%
Farming inputs (e.g. seeds, fertilizer, animals)	280	45.75
Physical resources (e.g. equipment and tools)	168	27.45
More land to farm on	81	13.24
Water access	42	6.86
Veterinary services/medicine	16	2.61
Financial aid	15	2.45
Other (business advice / basic services)	10	1.63
Total	612	100.00

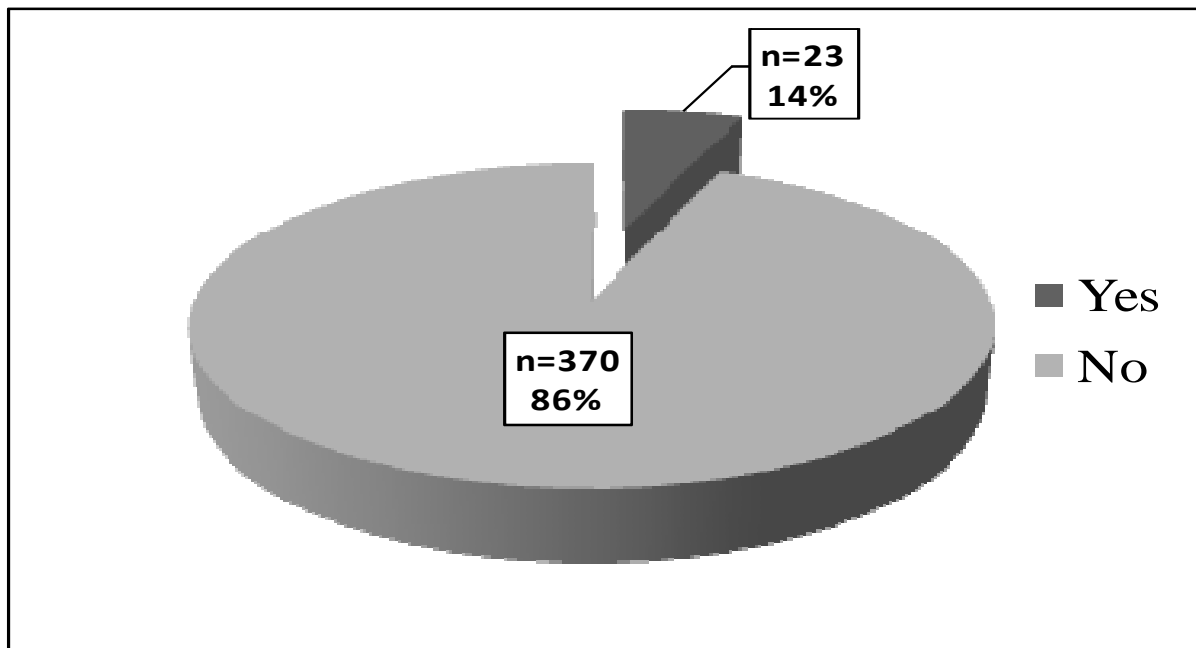
As indicated in the above table, the kinds of support most urgently required by the respondents were: farming inputs (45.75%), physical resources (27.45%) and a larger share of available land to farm on (13.24%). Farming inputs needed by the respondents included seeds, fertiliser, pesticides, fodder and livestock. Specific physical resources required by the respondents included: farming equipment such as fences, gardening tools, irrigation systems, tractors, greenhouses and storage facilities. The needs that were identified confirm the dependency of the UA practitioners on government, and thus probably indicate that some form of dependency comes into play in this regard.

Respondents also mentioned their need for increased and easier access to water resources (6.86%), veterinary services and/or medical supplies for animals (2.61%), and financial support (2.45%). A few respondents also noted that they would like to receive more business support in general, as well as better basic services (1.63%).

#### 9.5 Technical support and extension services

Respondents were asked whether any persons who provided technical support or extension services had visited them at any stage. They were also asked to specify the type of technical

support they had received (if any), as well as the types of technical services / extensions that they would like to receive (see Figure 9.3 and Table 9.3).



**Figure 9.3: Respondents who received technical assistance, 2008**

As shown in Figure 9.3, the amount of technical support that respondents had received was very limited, with 86% of respondents indicating that they had never been approached by technical or extension officials. Respondents who had, in fact, been visited by technical officials had received general agriculturally-related training, farming inputs and equipment or veterinary services. Some respondents expressed negative sentiments regarding the visits of the officials and mentioned that, although promises of assistance had been made, these promises had not been kept.

Respondents indicated that they required a variety of agricultural services and training. Table 9.3 gives some indication of the type of technical support and extension services required by respondents.

**Table 9.3: Technical support / extension services needed**

Type of support	Total	
	n	%
Horticultural knowledge/training	125	42.3
General agricultural knowledge/training	67	22.7
Soil science services/training	43	14.5
Livestock-keeping knowledge/training	34	11.5
Other (assistance by experts / veterinary services / business skills)	26	8.8
Total	295	100.0

Respondents identified horticultural knowledge regarding planting and caring for crops (42.37%) as their greatest technical support need. In addition, approximately one fifth of the respondents (22.71%) mentioned that they needed general information and training in respect of agriculture. Soil science services (14.58%) and training in livestock-keeping (11.53%) were also identified as support needs. Other needs included general assistance by experts, additional veterinary services and training in business skills.

### 9.6 Circumstances that would stop farming activities

Respondents were asked to specify the circumstances under which they would stop cultivating land or keeping livestock (see Table 9.4).

**Table 9.4: Circumstances that would induce respondents to stop farming, 2008**

Circumstances	Total	
	n	%
Physical incapability (old age/illness/death – do not wish to stop farming)	133	49.81
Lack of resources (water/ infertile soil /farming inputs )	64	23.97
Alternative means of support/sufficient money/affordability of food	31	11.61
Loss of land/not enough land	15	5.62
Theft or loss of produce/livestock/poultry	12	4.49
Change in social arrangements /moving to another place of residence	10	3.75
Other (e.g. if help is not received in the near future)	2	0.75
Total	267	100.00

As shown in Table 9.4 above, the majority of respondents did not wish to stop their agricultural activities. Almost half of the respondents (49.81%) stated that they would only stop farming if they were physically unable to continue as a result of old age, illness or death. Secondly, 21.73% of the respondents would only stop farming if they were unable to access the necessary resources to carry on. Such circumstances might include, for example, a shortage of water, owing to the lack of a water supply or to a drought; or a lack of farming inputs such as fertilisers, pesticides, implements and manpower. Thirdly, 11.61% of the

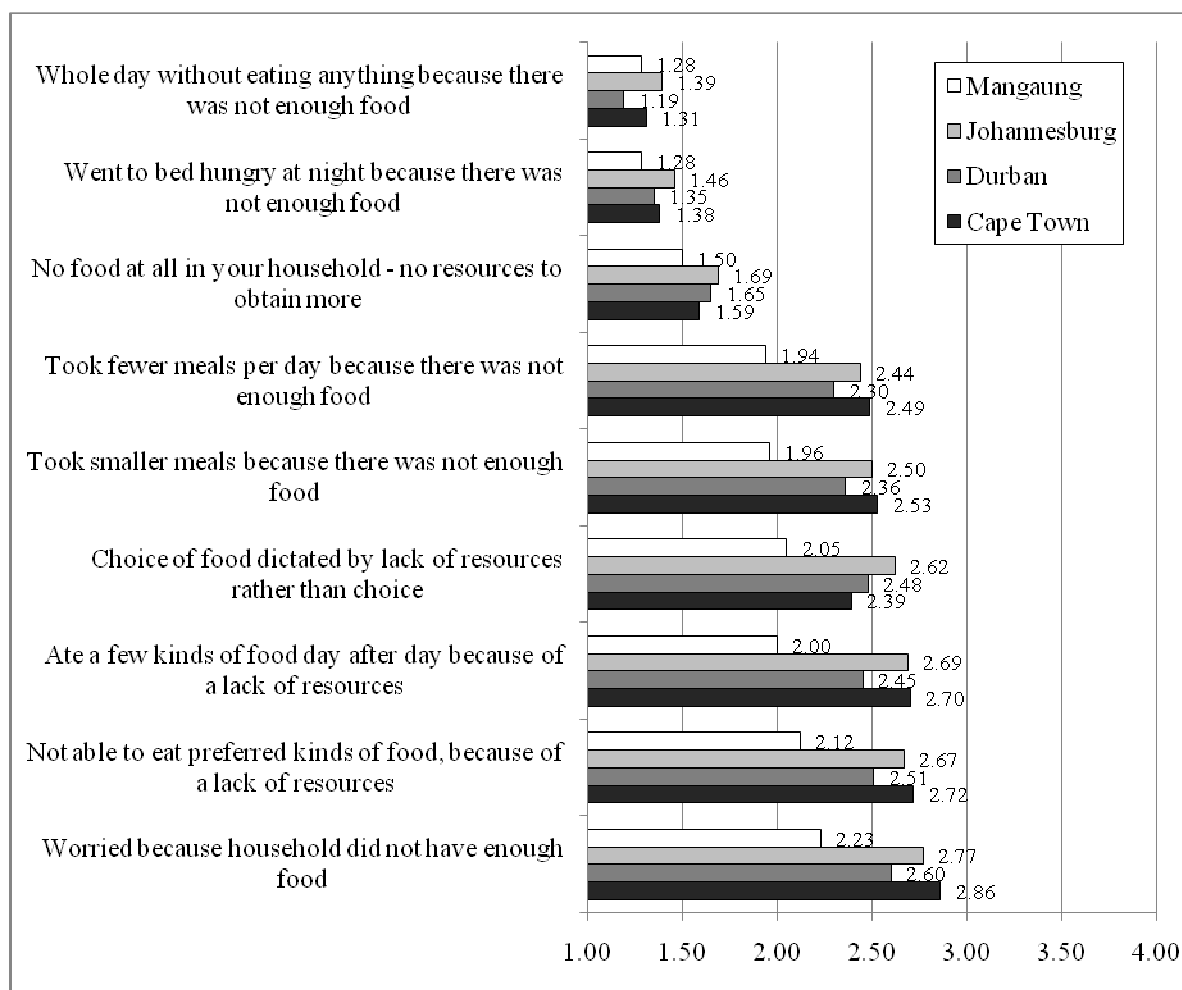
respondents indicated that they would stop farming if they could find any other alternative means of obtaining an income. Other factors that would induce respondents to discontinue their urban-agricultural activities included loss of land, theft-related problems, changes in social arrangements or moving to another place of residence. Some also indicated that they would stop farming if they did not receive help in the near future.

### **9.7 Legal constraints**

The respondents were asked whether there were any legal constraints preventing them from practising agriculture, and whether anyone had ever tried to stop them from being involved in UA. Only 2.8% of the respondents indicated that there were some constraints in this regard that hampered their UA activities. The main problem cited was related to conflict in respect of ownership and land use. Additional issues that were raised included conflicts with the authorities or other community members and conflict arising from damage caused by animals.

## **10. Food security**

A series of questions were asked to determine the level of food security. Every successive question indicated a more severe degree of food insecurity than the preceding question. The first question pertained to a subjective instance of anxiety, while the last postulated a severe case of going without food for 24 hours. The questions asked in between these extremes pertained to issues ranging from adjustments to the type of food eaten, to the amount of food available and severe cases of a total absence of food in the house. The respondents had to indicate how often they had experienced these situations during the previous month: never, rarely (once or twice), sometimes (three to ten times), or often (more than ten times). Figure 10.1 gives an indication of the general degree of food insecurity experienced by respondents. The degree of food insecurity experienced was particularised by means of a 4-point Likert scale, with a One indicating lower levels of food insecurity (never) and a Four indicating high levels of food insecurity (often).



**Figure 10.1: Degree of food insecurity that was experienced, 2008**

On average, the highest degree of food insecurity was experienced in Cape Town and Johannesburg. Durban also displayed high levels of food insecurity; but in general, food insecurity in Durban was slightly lower than in the cities of Cape Town and Johannesburg. Respondents in Mangaung experienced much lower levels of food insecurity than in the case of any of the other centres. Overall food insecurity was higher in Cape Town and Johannesburg, with households experiencing anxiety about not having enough food to eat; households not being able to eat the kinds of food they preferred, owing to a lack of food; eating few kinds of food on a daily basis because of a lack of resources; eating less favoured food because of a lack of resources; and taking smaller or fewer meals a day because there was not enough food. Though respondents in Cape Town generally experienced higher degrees of food insecurity than did those in the other cities, respondents in Johannesburg experienced more severe cases of food insecurity. More respondents in Johannesburg



indicated that they had no food in the household, went to bed hungry at night because there was not enough food, or went without eating anything for the whole day.

The following section will elaborate in greater detail on the level of food insecurity experienced in the four cities of Cape Town, Durban, Johannesburg and Bloemfontein (see Annexures 10.1 to 10.4). Similar patterns, with a few deviations, can be noted in the detailed tables above, as well as in the average extent to which respondents experienced food insecurity:

- Although respondents in Johannesburg generally reported having experienced higher levels of food insecurity, in a larger number of more severe food insecurity categories, respondents in Durban and Cape Town were more likely than those in Johannesburg to indicate that they *often* had no food in the household and that they had no resources to obtain more food. In Durban, 5.1%, and in Cape Town, 4.2% of the respondents indicated that they had been without any food more than ten times during the preceding month.
- The percentage of respondents who had often gone to bed hungry during the month preceding the interviews ranged from 2.1% in Cape Town to 2% in Durban, 1% in Mangaung and 0.9% in Johannesburg. However, if the responses of those respondents who reported that they *sometimes* went to bed hungry are considered together with those of the respondents who *often* went to bed hungry, a different picture emerges. When the two responses – *often* and *sometimes* – are combined, it can be seen that 14.2% of respondents in Johannesburg, 11.5% in Cape Town and 8% in Durban indicated that they often or sometimes went to bed hungry. In Mangaung, only 6% of respondents indicated that they often or sometimes went to bed hungry.
- Respondents in both Cape Town (10.3%) and Johannesburg (10.2%) also indicated a higher level of food insecurity, in that they often or sometimes went without food for the whole day. Considerably fewer respondents in Mangaung (5.1%), and only 2% of the respondents in Durban, indicated that they often or sometimes went without food all day long.
- The respondents in Mangaung were less likely to report high levels of the more severe forms of food insecurity. None of the respondents in Mangaung indicated that they often had no food, or that they had insufficient resources to obtain food for the household. In Mangaung, fewer respondents (6.1%) than in the other cities said that

they often or sometimes went to bed hungry. In addition – compared with the respondents in Durban (15.8%), Johannesburg (13.4%) and Cape Town (10.4%) – a significantly higher number of respondents in Mangaung (30.3%) reported that they never experienced anxiety about having enough food in the household.

- In all of the cities, the number of respondents who selected the *often* response decreased as the questions progressed from the first question – pertaining to a subjective instance of anxiety about food – to the last question, which referred to a severe case that entailed going without food for 24 hours.

Table 10.1 below considers the effect of total household income on food security.

**Table 10.1: Average food security rating by total household income, gender and period of involvement, 2008**

<b>Total household income</b>	<b>Average rating</b>	<b>Number of respondents</b>
<R11 280	2.17	76
R11 280 – R20 999	2.10	91
R21 000 – R37 779	2.14	85
>R37 779	1.91	84
<b>Gender</b>		
Male	2.11	263
Female	2.14	241
<b>Period of involvement</b>		
<1 year	2.37	47
1-5 years	2.17	157
6-10 years	2.11	101
11-15 years	2.06	61
16-20 years	1.98	30
>20 years	1.88	56

Only very small variations in the average food security rating of households are observed when the lowest three of the four different income levels are compared. The differences between these three categories also do not point to a trend. Those households earning above R37 779 reported significantly higher levels of food security, however.

From Table 10.1, it appears as if the gender of the individual involved in UA has no bearing on the average food security rating of the households. Where males are involved in UA, the households display only slightly higher levels of food security (2.14 vs 2.11).

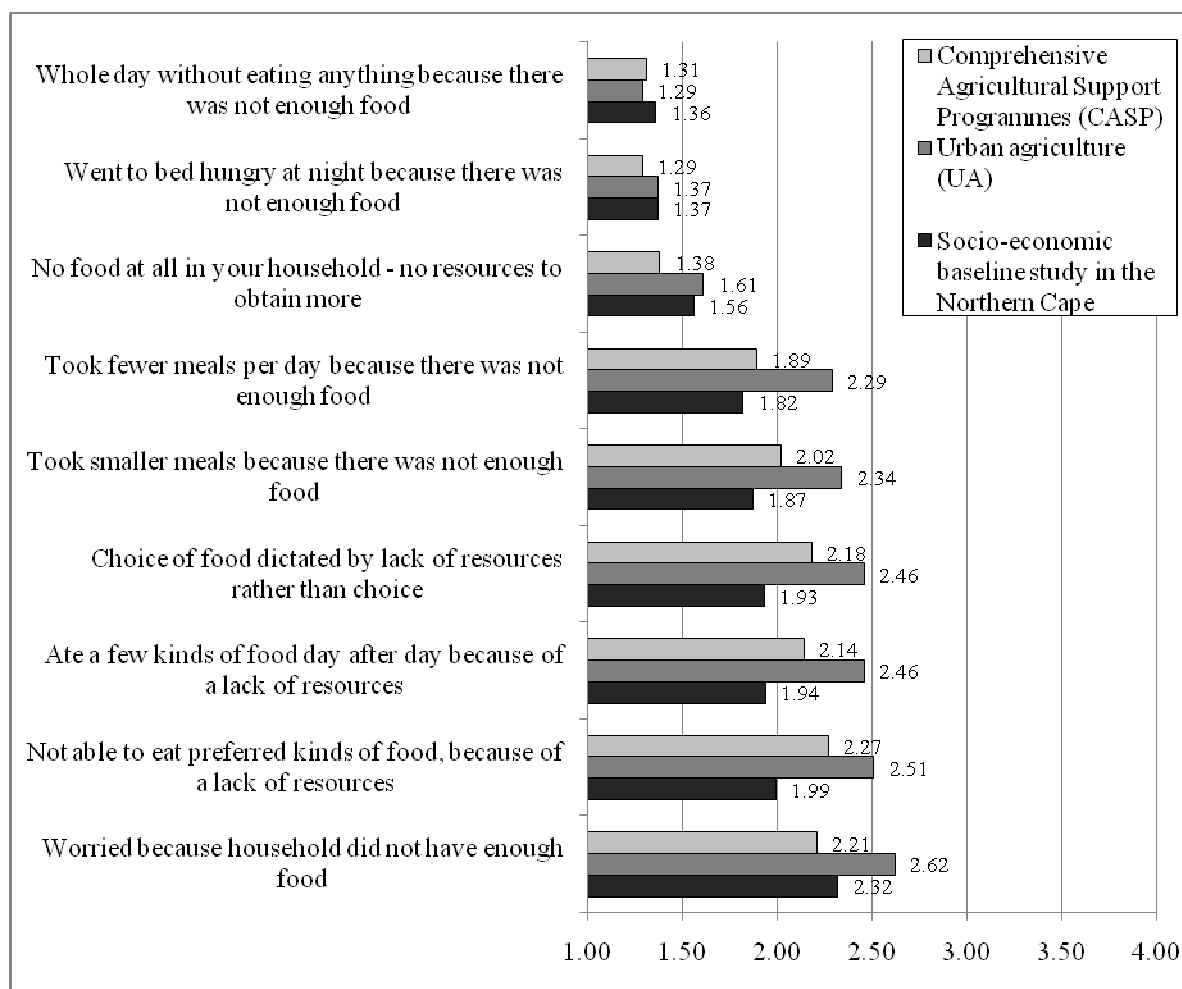
Regarding the role of the period of involvement in UA, Table 10.1 indicates that there appears to be a correlation between the period of involvement in UA and the households' evaluation of their food security. Households who have been involved in UA for longer periods tend to indicate more food security than those with a shorter history of UA involvement. The higher levels of food insecurity amongst households who have been involved for less than one year are probably an indication of people's desperation, as well as the fact that UA comprises their first attempt to address the food shortages.

The following section considers food security in general, in terms of a comparison between this study on UA and two other studies undertaken by the CDS. One study focused on the agricultural support programmes (CDS, 2008a)<sup>5</sup> in rural areas of the Free State, while the other study was a socio-economic baseline study conducted in the Northern Cape (CDS, 2008b)<sup>6</sup>. Figure 10.2 reflects the differences in respect of food security as reported in the three studies.

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<sup>5</sup> Centre for Development Support, 2008a. Assessment of the Comprehensive Agricultural Support Programmes (CASP) in the Free State Province. Bloemfontein

<sup>6</sup> Centre for Development Support, 2008b. Socio-economic baseline study: Carnarvon and Williston. SKA, Johannesburg.



**Figure 10.2: Degree of food insecurity as reported in three different projects**

The following observations can be made when the information on food security, as reported in the three projects, is compared:

- Respondents in two of the projects, namely the Comprehensive Agriculture Support Programme (CASP) and the UA Project, were chosen on the basis of their involvement in farming activities. Only 6.8% of respondents in the socio-economic baseline study in the Northern Cape produced food for household consumption.
- In each of the three projects, there seems to be a general tendency towards a higher incidence of the less severe forms of food insecurity. For example, the average degree of severity reported by respondents in respect of having experienced anxiety about food in the last month ranged between *rarely* and *sometimes*, while responses pertaining to the question of whether respondents had gone without food for the last

24 hours, or had gone to bed hungry, ranged between *never* and *rarely* (see Figure 10.2).

- In most cases, respondents in the cities experienced much higher degrees of food insecurity than did respondents in rural areas and in small towns. The respondents in small towns indicated the lowest level of general food insecurity, except in the case of the most severe food insecurity categories, such as going without food all day long and going to bed hungry. The average responses of the respondents in the rural areas ranged between the average responses of those respondents who resided in the cities and those who lived in the small towns (see Figure 10.2). However, in view of the fact that respondents in the rural areas were sampled on the basis of their farming activities, which had to include subsistence farming at the very least, these figures are quite high.
- The respondents in the cities – despite having a higher income than respondents in the rural areas – experienced the highest degree of food insecurity. The average income of respondents in the cities was R31 251, as against R24 883 in the rural areas. Respondents in the small towns had slightly higher incomes than did respondents in the cities. The average income of respondents in the small towns was R32 536.

## **11. Conclusion**

In conclusion, a number of aspects should be noted in respect of the role of UA in addressing the MDGs, as well as in respect of a range of other activities. The available evidence suggests that UA could provide a way of ensuring household food security and addressing household poverty – albeit more as a coping mechanism than as a mechanism that would be likely to generate extensive economic growth. The value of UA in respect of addressing poverty aspects is reflected in the following evidence:

- UA contributes approximately 25% of the household income of those households who obtain income from UA.
- If this is projected to include the income of all households involved in UA, approximately 5% of household income can be attributed to UA activities.
- If the production value obtained by those who do not produce for income purposes is added, then UA contributes approximately 7% of household income.

- In terms of MDG indicators, UA activities contribute 0.67 USD to the earnings of households who only receive UA income. They also assist households earning UA and other income to raise their income (in USD terms) above 3 USD per person per day.
- There seems to be a correlation between income from other jobs and income from social grants and UA activities.
- Back-yard gardening contributes only a small percentage of income to households, while earnings from communal-land UA activities provide the highest incomes.
- There is also preliminary evidence that positive institutional responses by municipalities, such as in the case of Durban (eThekweni), have some positive implications for the incomes of poorer households.

Further evidence of the fact that UA is a coping mechanism can be found in the following results pertaining to the questions regarding food security:

- The lower the income, the higher the levels of food insecurity.
- The longer the period of involvement in UA activities, the lower the levels of food insecurity. This probably suggests that UA activities are one of the main sectors to which people have recourse once food security comes under threat – hence the higher levels of insecurity in the case of those practitioners who had been involved in UA for less than one year.

In terms of social aspects, the following should be noted:

- UA attracts older people; but it was not clear whether this should be attributed to generational differences, the fact that older people receive old-age pensions, or the more intensive pressure on older households in respect of food security.
- Although there are minor differences in terms of gender, the discrepancy between males and females in respect of the income generated from UA is not significant in extent. In fact, females generate far more income from communal land farming than males do.

In view of these realities, the following policy-related considerations should be noted (although much more evidence will probably be required before more detailed policy advice can be put forward):

- The availability of land seems to be a crucial aspect. Possibly even more important, however, are the issues of planning for UA and making land available in this regard. The Durban case study suggests that the availability of communal land could make a significant contribution. Nevertheless, more evidence should be obtained in respect of the possible contribution of larger stands.
- Moreover, despite the evidence which suggests that the income made by back-yard UA practitioners is small, this is probably the area in which technical support could generate the largest potential increase in production.
- A third policy issue relates to the level of subsidisation required for UA activities. It seems clear from institutional responses that the relevant inputs are extensively subsidised; and specific inputs have also been requested by a number of respondents. The fundamental question to be addressed in this context is related to the level of input subsidisation, as against the consequences in terms of the food aid that would need to be provided in the absence thereof.
- The evidence suggests that technical support is one of the main needs of UA practitioners. It should be noted that agricultural extension services in South Africa have deteriorated; but it seems that an adequate distinction should be made between rural agricultural extension services and services provided to UA practitioners.
- Land ownership does not seem to be a prerequisite for production, since the largest proportion of income from crop production was generated by UA activities on communal land.

Finally, UA will not solve the problems relating to poverty, nor will it address the targets set in the MDGs. Yet in the context of multiple livelihoods and incomes, UA probably makes a significant contribution, which cannot be ignored in terms of possible support, or at planning level.

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## Annexures

**Annexure 10.1: Food security in Cape Town, 2008**

Nature of food insecurity	Never		Rarely		Sometimes		Often		Total	
	n	%	n	%	N	%	n	%	n	%
Worried because household did not have enough food	10	10.4	9	9.4	61	63.5	16	16.7	96	100
Not able to eat preferred kinds of food because of a lack of food	10	10.4	14	14.6	65	67.7	7	7.3	96	100
Ate only a few kinds of food day after day because of a lack of resources	9	9.4	18	18.7	62	64.6	7	7.3	96	100
Choice of food dictated by lack of resources rather than by preference	10	10.4	15	15.6	66	68.8	5	5.2	96	100
Took smaller meals because there was not enough food	14	14.5	21	21.9	57	59.4	4	4.2	96	100
Took fewer meals per day because there was not enough food	14	14.6	25	26	53	55.2	4	4.2	96	100
No food at all in household – no resources to obtain more	58	60.4	23	24	11	11.4	4	4.2	96	100
Went to bed hungry because there was not enough food	73	76.0	12	12.5	9	9.4	2	2.1	96	100
Went hungry all day long without eating anything, because there was not enough food	78	81.3	8	8.3	8	8.3	2	2.1	96	100

**Annexure 10.2: Food security in Durban**

Nature of food insecurity	Never		Rarely		Sometimes		Often		Total	
	n	%	n	%	n	%	n	%	n	%
Worried because household did not have enough food	16	15.8	21	20.8	51	50.5	13	12.9	101	100
Not able to eat preferred kinds of food because of a lack of food	16	15.8	23	22.8	56	55.5	6	5.9	101	100
Ate only a few kinds of food day after day because of a lack of resources	15	15.2	32	32.3	44	44.4	8	8.1	99	100
Choice of food dictated by lack of resources rather than by preference	17	16.8	26	25.7	51	50.6	7	6.9	101	100
Took smaller meals because there was not enough food	18	17.8	35	34.7	42	41.6	6	5.9	101	100
Took fewer meals per day because there was not enough food	18	17.8	41	40.6	36	35.7	6	5.9	101	100
No food at all in household – no resources to obtain more	61	60.4	19	18.8	16	15.8	5	5.0	101	100
Went to bed hungry because there was not enough food	75	75.0	17	17.0	6	6.0	2	2.0	100	100
Went hungry all day long without eating anything, because there was not enough food	84	83.2	15	14.8	2	2.0	0	0.0	101	100

**Annexure 10.3: Food security in Johannesburg**

Nature of food insecurity	Never		Rarely		Sometimes		Often		Total	
	n	%	n	%	n	%	n	%	n	%
Worried because household did not have enough food	13	13.4	13	13.4	54	55.7	17	17.5	97	100
Not able to eat preferred kinds of food because of a lack of food	9	9.2	23	23.4	57	58.2	9	9.2	98	100
Ate only a few kinds of food day after day because of a lack of resources	8	8.2	24	24.5	56	57.1	10	10.2	98	100
Choice of food dictated by lack of resources rather than by preference	8	8.2	29	29.5	53	54.1	8	8.2	98	100
Took smaller meals because there was not enough food	10	10.2	38	38.8	41	41.8	9	9.2	98	100
Took fewer meals per day because there was not enough food	10	10.3	42	43.3	37	38.2	8	8.2	97	100
No food at all in household – no resources to obtain more	56	57.1	20	20.4	18	18.4	4	4.1	98	100
Went to bed hungry because there was not enough food	68	69.5	16	16.3	13	13.3	1	0.9	98	100
Went hungry all day long without eating anything, because there was not enough food	71	72.5	17	17.3	9	9.3	1	0.9	98	100

**Annexure 10.4: Food security in Mangaung**

Nature of food insecurity	Never		Rarely		Sometimes		Often		Total	
	n	%	n	%	n	%	n	%	n	%
Worried because household did not have enough food	30	30.3	25	25.3	35	35.3	9	9.1	99	100
Not able to eat preferred kinds of food because of a lack of food	32	32.3	26	26.3	38	38.4	3	3.0	99	100
Ate only a few kinds of food day after day because of a lack of resources	36	36.4	28	28.3	34	34.3	1	1.0	99	100
Choice of food dictated by lack of resources rather than by preference	33	33.3	29	29.3	36	36.4	1	1.0	99	100
Took smaller meals because there was not enough food	38	38.4	28	28.3	32	32.3	1	1.0	99	100
Took fewer meals per day because there was not enough food	38	38.4	32	32.3	26	26.3	3	3.0	99	100
No food at all in household – no resources to obtain more	62	63.3	23	23.4	13	13.3	0	0.0	98	100
Went to bed hungry because there was not enough food	78	78.7	15	15.2	5	5.1	1	1.0	99	100
Went hungry all day long without eating anything, because there was not enough food	77	77.8	17	17.2	4	4.0	1	1.0	99	100