



## HSRC Research Output submission template

Please complete this template and attach it along with the print or electronic copy of the research output concerned.

Submit to **Hanlie Rossinger** ([hrossinger@hsrc.ac.za](mailto:hrossinger@hsrc.ac.za))

It will be added to the research output database for publication on the Internet, Intranet and in the HSRC Annual Report.

**Project number:**

MHABAA

**Title:**

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

**Authors:**

Matshe, I

**Journal Title:**

- Peer reviewed
- Non-peer reviewed

**Suggested keywords:**

Poverty, hunger, sustainable food production, food security policy, land reform,

**Select output type from the list below:** (delete inappropriate options)

- Monograph
- Chapter in Monograph
- Journal Article
- Newspaper Article
- Review in Journal
- Review in Newspaper
- Research Report- Client**
- Research Report- Other
- Conference or Seminar Papers
- Questionnaires
- Training Manuals
- Video
- Database on a CD-ROM (containing only the database)
- Database on a CD-ROM (containing other documents/databases)
- Database on a File Server
- Website
- Report on an HSRC trip
- Education Assessment Instruments
- Psychological Assessment Instruments
- Pamphlet (published)
- Pamphlet (unpublished)

**Confidential:** Yes

**Website URL:** (where appropriate)

This paper begins by considering who the hungry are in general before considering the conceptual framework and context of smallholder livelihood. It then considers the relationship between poverty and food security and how the two have been addressed in the past, and also addresses the policies that have been instituted to address

sustainable food security through production. It then considers the effects of food security focused policy interventions, followed by specific policy effects and outcomes including success factors in different countries after which it summarises the success factors of own-production before the conclusions are drawn.

HSRC RESEARCH OUTPUTS

5823

**CONTRIBUTION OF OWN-PRODUCTION TO FOOD  
SECURITY: EVIDENCE FROM SUB-SAHARAN AFRICA**

**Innocent MATSHE**

**March 2009**



**HSRC**  
Human Sciences  
Research Council

---

centre for poverty employment and growth

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan  
Africa

---

**Human Sciences Research Council**

*This paper forms part of the Food Security Project*

**Produced by:** Innocent Matshe  
**Contact:** Dr Miriam Altman  
Executive Director, CPEG  
**E-mail:** [maltman@hsrc.ac.za](mailto:maltman@hsrc.ac.za)  
**Tel:** +27 12 302 2402

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan  
Africa

---

**Table of contents**

Introduction .....	4
1. Who are the hungry?.....	5
3. Conceptual Framework and Context of Causes & Consequences of Poor Smallholder Livelihood Performance .....	6
4. Poverty and Food Insecurity .....	7
5. Policies for Sustainable Food Security through Production.....	9
6. Effects of Food Security Focused Policy Interventions .....	11
7. Land Reform, Food security and Employment.....	12
8. Effects of Government Provision of Work Programs.....	14
9. Summary of success factors .....	14
10. Conclusion.....	15

## Introduction

In recent years, several countries in Sub-Saharan Africa (SSA) have emphasized the importance of employment in rural areas as a way of reducing rural poverty by setting up schemes for strategic priorities and financial resources for rural development. In essence the primary motive is to solve the immediate problem of hunger through own production of food and the generation of income levels that enable rural populations to buy enough food Dorward, et al. (2004). This contrasts with past policies where agriculture was the only employment sector in rural areas. Today's rural areas have changed and offer different business opportunities not only in agriculture, but also in service sectors such as mass and small-scale tourism activities, and aquaculture although many countries still regard agricultural self-employment in rural areas as the key element of rural development. Since most of the production in rural areas is conducted by farming households, their production plays an important role in rural livelihood strategies.

Most agricultural production in the rural areas is still predominantly rain-fed, fragmented and subsistence in character. Any hope that production of agricultural commodities could address food security and employment problems needs to consider how this sector could be transformed. The transformation of subsistence systems does not come about because of natural and biological resource constraints, but because of competing demands for the farmer's time. Thus, there is a process of substitution of traded inputs for non-traded inputs in commercialisation. Separation of this substitution process into components that require power (land preparation, threshing, etc.) from those that are control functions which require human judgment (planting, weeding, harvesting, etc.) is useful since it opens the possibility that policies could encourage or discourage the pace of each. As the latter substitution is of human labor, issues of rural employment arise. These are driven by the opportunity cost of farm labor because of the rising non-farm wages. Therefore, a paradigm shift from attention to food self-sufficiency as a goal to food self-reliance is needed<sup>1</sup>.

Further, agricultural growth that fosters improvements in productivity on small farms has proven to be highly effective in reducing poverty and hunger and raising rural living standards, as demonstrated in large parts of Asia during the Green Revolution (Rosegrant and Hazell, 2000). Evidence from across Southern Africa indicates huge efforts towards resourcing rural areas, where most small holder farmers were the main beneficiaries. The aim being to increase production and employment by providing subsidized inputs and developing production related infrastructure and institutional service provision. Unfortunately, this has resulted in little real progress in terms of relative increases in agricultural employment and food security. Although actual policies employed differ slightly across the sub-region, most of the interventions were

---

<sup>1</sup> Food self reliance refers to a much wider set of issues than just food self-sufficiency which is restricted to just the self production of food

mainly tailored towards providing policy support with increased extension, subsidized inputs, increased access to markets and farmer training including demonstrations for increased output. In Senegal, Zambia, Kenya and Uganda in the decade 1980-1990 government policy effort was based primarily on production, although intervention was emasculated by negative central government budgetary effects on the macro-economy (Poulton, et al., 2006). Productivity (in terms of relative output growth) fell by between 4 -13%. However, some countries in the region have had better success by directing support most exclusively to small holder farmers whilst the rest provided sector-wide support.

But why small holder farmers? The answer to this question can be found in where they (small-holder farmers) are located within income groups and the fact that these farmers tend to be the largest (in terms of population) economic activity group. Thus, this paper begins by considering who the hungry are in general before considering the conceptual framework and context of smallholder livelihood performance in section 3. Section 4 then considers the relationship between poverty and food security and how the two have been addressed in the past, whilst section 5 addresses the policies that have been instituted to address sustainable food security through production. The then considers the effects of food security focused policy interventions, followed by specific policy effects and outcomes including success factors in different countries (section 7 and 8). Section 9 summarises the success factors of own-production before the conclusions are drawn in section 10.

## 1. Who are the hungry?

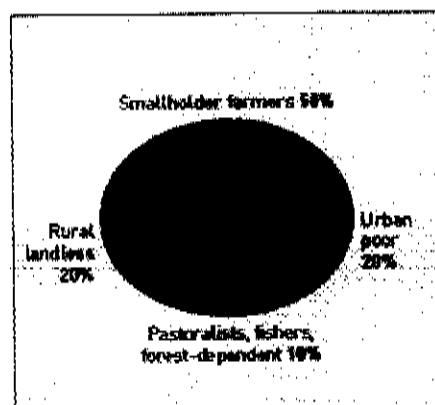
Most of the world's hungry live in rural areas and depend on the consumption and sale of natural products for both their income and food. Hunger is concentrated among the world's landless or farmers whose plots are too small to provide for their needs. However, hunger is also a growing problem in the fast growing urban spaces, which are now home to more than 40 per cent of urban inhabitants in developing countries<sup>2</sup>. In sub-Saharan Africa and Southern Asia, the proportion of undernourished people decreased in the last 2 decades, but the numbers of hungry people rose (FAO, 2004). In absolute terms, the number of undernourished people in the developing world fell by just 9 million over this period. South Africa also mirrors the above distribution although given its level of urbanization urban hunger tends to be much more pronounced.

### Figure 1. Who the world's hungry are

---

<sup>2</sup> Note that not all of the urban spaces are fast growing. The 40% referred to here refer to the population in the fast growing urban spaces.

## Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa



Source: FAO, 2004

Many poor households in South Africa are involved in small-scale farming, but agriculture does not contribute more than 4% to their total income even though farming takes up very high time input from family members. The level of farming undertaken relies on the amount of access to land, water, seeds and agricultural instruments. Under apartheid most black farmland (so-called homelands) were severely overused because more than 80% of the population were restricted to less than 13% of the land, leading to soil erosion and low productivity<sup>3</sup>. As a result, many black farm families or some members of these families were engaged in non-agricultural employment to supplement their livelihoods, a feature of most African rural dwellers. Increasingly poor subsistence farmers rely more and more on purchased food. Smallholder farmers and rural dwellers, thus are more concerned about which livelihood strategies would give them the most welfare.

### 3. Conceptual Framework and Context of Causes & Consequences of Poor Smallholder Livelihood Performance

Literature on African agricultural development endorses a common assertion that national and global efforts to accelerate development of smallholder peasant agriculture in Sub-Saharan Africa have been a resounding failure to date. The evidence for failure is the present state of a subcontinent facing declining per capita food production and vulnerable to complex incidences of famine-induced starvation and widespread hunger and endemic poverty. In Southern and Eastern Africa per capita food production and employment has declined precipitously over the past three decades while food requirements continue to escalate due to rapid population growth of 2-3% (World Development Report, 2008). Since a majority of the African

<sup>3</sup> See [www.aidc.org](http://www.aidc.org)



population is engaged in semi-subsistence agriculture, their state of hunger, poverty and livelihood insecurity directly reflects the poor performance of the traditional African agricultural systems. Transformational development of the smallholder traditional farming sector is therefore essential for ensuring production of adequate food supplies for a rapidly increasing population. Stable growth in production of food and cash crops is also important for stimulating growth of industrial urban sub-sectors of the economy through provisions of raw materials for processing and cheap food for the urban working class (i.e. forward linkages).

Poor performance of the smallholder agricultural sector acts as a double-edged sword. At micro-level it sustains poverty and livelihood insecurity among the farmers themselves while at macro level it reduces prospects for agricultural led pro-poor economic growth. Declining agricultural performance is a major driving force behind growing poverty in the African smallholder farming population and its economic recovery offers greatest prospects to rural population to escape out of poverty. Food insecurity among the vulnerable poor rural farming populations induces a risk-minimizing conservative attitude towards farming and livelihood systems. This attitude sustains traditional farming systems when adoption of innovative technologies and unconventional livelihood strategies is required to get out of entrenched poverty and food insecurity. By locking out riskier but highly rewarding farm production and consumption possibilities, the same conservative traditional farming and livelihood coping systems that makes it possible for the poor to survive their poverty also limits their prospects for propelling themselves out of poverty through transformational agricultural development. There is however, a disturbing lack of clarity on the nature of the dynamic interactive and iterative forces driving Africans into poverty.

#### 4. Poverty and Food Insecurity

When abject poverty and food insecurity of poor smallholder farmers is known to emanate from subsistence maize-based farming system, the rationality and seriousness of the poor families who continue with subsistence agriculture as a primary livelihood strategy, is often questioned as if better livelihood strategies exist. Yet most attempts to impose on the poor alternative technologies and farming systems or livelihood strategies have had very limited successes and often left target beneficiaries worse off. Juxtaposing the farming systems and livelihood strategies of the poor against those of their wealthier counterparts often results in tacit condemnation rather than the development of a better understanding of the structural predicaments sustaining poverty and food insecurity in the African villages. When the root causes and behavioral manifestations of poverty and household food insecurity are not understood, then policy interventions are often ill-informed and unlikely to succeed in transforming the poor out of poverty and food insecurity. Two strategic questions can guide the framing policy interventions: (i) Is rural poverty and food insecurity best understood as the optimal outcome of the "very best possible choices" available from their economic and policy environment? (ii) Is poverty and food insecurity a sub optimal outcome and product of "very poorly informed livelihood choices" given all possibilities from their economic environment?

## Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

The first of these two questions portrays poverty as a problem with structural root causes vindicating the fact that the poor vulnerable population are victims of their structural circumstances doing their "best possible" to climb out of poverty. Thus, far from being social aberrations, poverty and food insecurity is a robust and self sustaining steady state equilibrium social outcome. To change the poverty outcome, progressive pro-poor policies and institutional innovations are required. These should be capable of transforming present economic and institutional environments that are presently sustaining poverty in order to offer to the poor and the vulnerable new possibilities for improving livelihoods and food security. This has been the stance taken by most SSA countries. In Kenya though, major attention was given to macro-economic stability (ie. external environment). This would, it was hoped, deal with appropriate market incentives to drive production and enterprise development. The institutional arrangements were rather secondary and severely hampered by poor infrastructure (Kinyau, 2002).

The key to addressing smallholder food security and poverty issues rest with innovations that mitigate internal constraints and provide external economic opportunities for the poor. The search for appropriate pro-poor development strategies must focus attention at getting right the policy and institutional conditions to enable the poor to enhance their productivity and income realizations from their smallholder agriculture as well as from their other livelihood strategies. New opportunities for the poor must be accomplished without reducing livelihood opportunities and possibilities for the present rich, food secure rural populations. Underlining the divergences between livelihood choices of the rich food-secure populations from those choices made by the rational but vulnerable poor rural populations are fundamental differences in household-specific circumstances and differences in their institutional access to market opportunities and support services. There is a subset of behavior-defining external drivers and internal household specific factors that are important for getting the poor onto sustainable income and food security growth pathways.

As insinuated earlier fundamental factors driving livelihood and food security performance of smallholder farmers fall into two dynamically linked internal and external categories. The external factors are the macroeconomic and policy factors that are fixed for individual families and set their livelihood possibilities frontiers. Internal factors are the household-specific microeconomic circumstances which separate the possible from all available livelihood strategies. The domestic macro-policy environment is either enabling and uplifting to the rural poor or disabling and stifling their livelihood opportunities. In many cases there is very little that the poor can do that they have not tried already to improve their incomes and food security situations. Sometimes the food insecure populations could possibly do more to take advantage of currently available opportunities for improving their expected incomes and reducing their food security risks. In most cases, appropriate domestic economic and market policy reforms that inject new resources, new technologies and improve access to new market opportunities for the rural poor are key to tackling poverty and food insecurity among the semi-subsistence smallholder African agricultural populations (Colman, 2000).

## 5 Policies for Sustainable Food Security through Production

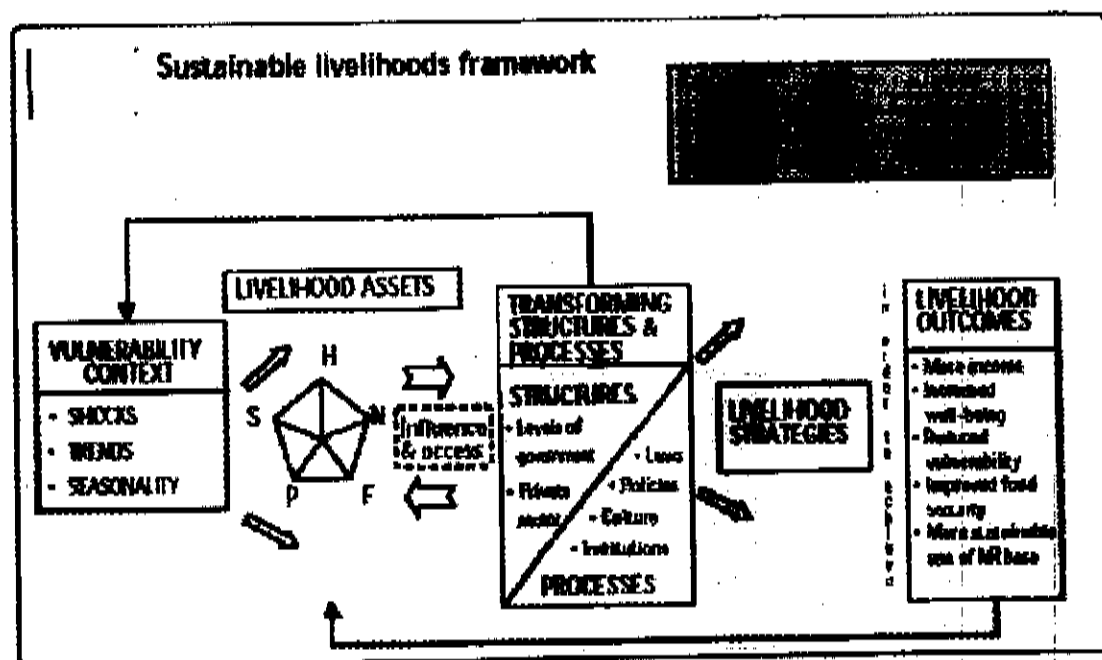
Domestic macro-economics policy and agricultural commodity market environment can either enable or disable rural farm-households' capacity to increase their agricultural incomes and food security. Policies that stimulate domestic economic growth can potentially stimulate smallholder agricultural growth through increased demand for food and agricultural commodities. Growing industrial and service sectors can potentially provide employment to surplus family labor and motivate rural families to invest in higher-yielding, capital-intensive agricultural technologies that liberate some family members to seek competitive jobs in the urban wage markets. However, industrial growth translates into rural agricultural incomes growth, only when smallholder farmers enjoy competitively priced access to agricultural and food markets that create wealth from agriculture for farmers rather than use pro-urban pricing. Unfortunately, in many African countries there has been a lack of access to these markets (Dardel et al., 2004). Enabling economic and sector-specific policies that sustain growth in food and agricultural production from the smallholder sector enhances incomes and creates wealth essential for transformational development of semi subsistence farmers capitalizing on diversity of available on-farm and off-farm livelihood strategies yielding robust incomes.

An enabling economic policy environment that ensures development of essential rural market infrastructure – roads and communication systems - is vital for enhancing efficiency in production and consumption choices (Dorward and Kydd, 2006) Subsistence farming does not take advantage of efficiency benefits associated with specialization and exchange and is relatively an inefficient way of ensuring household food security through food self-sufficiency. Governments also play an important role in providing an enabling institutional and legal framework which guarantees basic economic freedoms and security of property rights for the poor as well as the rich members of the community. These four basic pillars for development – transport infrastructure, agricultural research and extension of appropriate technologies, security of property and access to markets – define the basic preconditions for stimulating sustainable transformational development of smallholder agricultural production and livelihood system.

An enabling macroeconomic and marketing environment is also crucial, but not sufficient for sustaining better production and livelihood performance of smallholder agricultural households. In Kenya the stable macroeconomic and marketing environment did not yield a strong rural smallholder production base in the 1980-2000. When domestic macroeconomic situation is stable and market conditions conducive and all external constraints are non binding, household-specific internal socioeconomic circumstances become the critical determinants of food security and livelihood outcomes of agricultural populations. Adequate ownership of livelihood capital assets is essential for pursuing a range of livelihood opportunities and is a key determinant of livelihood performance and ability to accumulate assets for optimal production and for consumption smoothing in the face of seasonal climatic and market risks (see figure 2). Reducing asset poverty is the key to enhancing food security and livelihoods for the poor and vulnerable rural agricultural populations. All

transformation of structures and processes though influential play a second tier role that shape livelihood strategies in order to attain higher livelihood outcomes. (Dorward et al., 2004; DFID, 2000).

Figure 2 Sustainable livelihoods framework



Source: DFID/FAO, 2000

The livelihoods approach recognizes that households to possess livelihood assets essential to their strategies: human capital, natural capital, financial capital, social capital and physical capital. Household adjust to their physical, social, economic and political environments by using these assets, through a set of livelihood strategies designed to strengthen their well being (Stokes, 2003). Households are only viewed as being sustainable if they can adjust to threats without compromising their future ability to survive shocks to their livelihoods.

Once vulnerable households have the minimum capacity to produce marketable surpluses, they are able to progressively reduce their exposure to livelihood risks through their livelihood strategies and investments in assets to increase income and wealth holdings. Zimbabwe's experiences during the first decade of independence confirms the ability of smallholder farmers to self finance their transformational development from subsistence agriculture to diversified market-oriented agriculture subtending higher incomes, greater resilience and better food security prospects (Eicher and Staaz, 1995). With improved access to technology and markets, acreage and yields of maize and cash crops increased beyond subsistence needs creating the space and financial surplus for farmers to explore high value cash crop production

opportunities and investment in children's schooling to further diversify family incomes by positioning their children for remunerative formal employment in industry and commerce.

## 6 Effects of Food Security Focused Policy Interventions

As section 4 suggests, support to small farmers has been premised on the realization that there are sections of society that tend to be more food insecure than others. However, the results of policy intervention have been mixed. In Zimbabwe between 1980- 1986 staple maize output more than doubled compared to the previous decade at the back of favourable commodity prices, coupled with improved infrastructure and institutional services. Land area planted with maize rose substantially and the amount of marketed maize produced by small-scale farmers represented 47% of total national maize output in 1986 and had risen to 90% by 1989 (Stanning, 1990). Marketed output of finger millet rose from 386 tonnes in 1983/84 to 12 500 tonnes in 1985/86. The production of cash crops by small producers also increased after agriculture policy was refocused towards these farmers. Cotton production rose from 160 000 in 1980 to 350 000 tonnes in 1990, which represented a 50% increase. All in all, after a decade of pro small holder policy support by 1991 small holder farmers contributed more than 50% of maize production, more than 60% of cotton and 99% of sunflower and most of the small grains and groundnuts that were formally marketed.<sup>4</sup> (Rohrbach, 1988, Mudimu, 1992, Eicher and Staaz, 1995). Such was the success of the interventions in the 1980s that this period is referred to as Zimbabwe's smallholder Revolution (Rukuni and Eicher, 1994) and were attributed mainly to the linkage between technology, service organization and institutions (or parts thereof) developed specifically to deliver on the policies adopted to advance small holder agricultural development. Similar success at a smaller scale was recorded by coffee farmers in Malawi (Chirwa, et al., 2007)

Most research in Zambia and partly Uganda and Kenya shows that policy adopted was mostly directed at providing smallholder producers relatively easy market access without necessarily giving direct support that targeted own production (supply-side) explicitly (Bezuneh, et al., 2004). As in the Zimbabwean case, subsidies for inputs were generally used to enable these producers to afford fertilizers and seeds during the pre-structural reform periods. This, though, did not substantially improve food security in these countries because of several reasons including the large deeply imbedded socio-economic inequalities, poor access to quality land by the majority of households, lack of appropriate technology for an ever changing production environment, lack of adequate institutional and infrastructural support and poor support services. As a result, the labour participation rates in rural agricultural production were very low. Percentage of household labour that spent more than 50% of their labour time on

---

<sup>4</sup> Note though that these increases leveled-off and in fact were reversed in the 1990s when pressure on central budgets forced the withdrawal of subsidies inputs and macroeconomic adjustment necessitated by poor macroeconomic management and political crisis.

## Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

agricultural production kept falling and household and individual food insecurity worsened (Obwona, 2002).

In analyzing the successes and failures of supply-side, state-led policies and demand-side market liberalization in Sub-Saharan Africa Dorward, et al. (2004) find that some of the major issues that dragged back progress in these countries included problems related to public goods, complementary coordination of policy, and market development. They describe a common pattern of government policy in successful green revolutions in terms of two active policy phases. The first phase establishes the basics with investments in public goods to develop technologies that will raise small farms' potential productivity. During this time, it might well be that extensive production and other non efficient types of production could be pursued. Then the second phase kick-starts markets with carefully coordinated complementary investments to improve small farmers' access to the financial services and input and output markets necessary for technology adoption. This reiterates the important role of not only sequencing and effectiveness, but also complementary investment and market development in enhancing rural agricultural development, which did not actually improve food insecurity in these countries.

Nevertheless, agriculture still maintains its important role in the rural and the national economy. Self-employment trends in agriculture show that agricultural employment and self-employment exhibit a slight decrease over time and that the impact of this decrease in male and female employment differs among countries in Sub-Saharan Africa (Mellor, 1984). To sustain food security, availability, access and utilization of food have to be secured. Clearly, the challenges of making a positive impact on food availability (i.e. supply-side) are firmly routed in the ability of rural dwellers to access production inputs and land.

### **7 Land Reform, Food security and Employment**

The Integrated Food Security Strategy of the South African government highlights land, among others, as an important factor in food security. This is because, there cannot be own production and household food security if households do not have access to land of enough quantity and quality to make a difference in either the quantity produced or the income from the produced output. Those who are able to work but are unemployed across most of Southern Africa do not have access to any social welfare programmes and are vulnerable to food insecurity. Such people can significantly reduce their vulnerability to food insecurity with access to land for own production and sales. Many rural people in this region therefore depend very much on wage or non-farm employment. In other words, employment is important in most rural areas, but as farm jobs have continued to dwindle and poverty spreads and deepens, vulnerability to food insecurity also increases.

The 1997 rural survey suggests that in South Africa as many as 71% of people in living rural areas (in former homelands) had access to some form of land for farming (StatsSA, 1999). However, the majority of these people were engaged in subsistence farming. In various parts of Southern Africa very little income was generated from

## Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

the sale of various crop outputs and livestock in such households, which could supplement their food intake with own production, but evidence from various sources indicate that the small amounts generated are usually crucial for dietary diversification and employment in an high unemployment sub-region (Rukuni, et al., 2006). The 1999 October household survey also indicates that about 7.96 million produce agricultural goods for own consumption and income. About 81% of these people, however, produce agricultural goods mainly for own consumption. This is quite important for food security since between 2002 – 2007, the total number of black South Africans involved in agriculture was in the order of 4 million people or more (PLAAS, 2008) and it is this group that has the highest levels of food insecurity.

As part of a study to monitor the quality of life of land reform beneficiaries, May, et al (2000) concluded that land reform could potentially reduce the poverty rates in rural areas by 1%. This figure, though seems to be very small and questionable but it indicates that land reform can reduce poverty and lower the vulnerability to food insecurity in South Africa. The larger the size of land, and the smaller the number of beneficiaries, the higher the farm income per household and the lower the vulnerability to food insecurity. Mlambo (2000) also finds that rural households with a sizeable amount of land are better off (in personal welfare terms) and are less likely to be poor and food insecure than those with marginal lands or without land.

Most of the studies mentioned above, however, considered only agricultural production in estimating household incomes from land. Land can and has been used in various parts of the world and in South Africa to create other rural livelihoods. Rural people make use of wild and domestic plants and spaces around them. These livelihoods include the collection of natural resources such as fuelwood, edible herbs and fruits, aquaculture game-meat, medicines and others, either for direct consumption or for sale (Shackleton, 1999). This is critical for food security. International experience also shows the importance of access to land and land reform in alleviating poverty and hence food security.

Evidence from further afield also indicates the importance of land access. The consequence of reforming landholding and access in China was that there was a reduction in income-based absolute poverty to an average of approximately 6-11% in 1979-81 (El-Ghonemy, 1990). There was also a sustained reduction in the number of the poor from about 240 million to about 50-80 million over the same period. Furthermore agricultural growth rate, crop yields and per-capita food grain production rose substantially. South Korea also experienced considerable improvement in livelihoods after land reform. The South Korean land reform programme resulted in 60% of the total cultivated land area and an improved Gini coefficient of land redistribution from 0.729 to 0.384 between 1945 and 1965. The rate of growth of agricultural output was impressive by international standards. Average annual rate of food production increased by 4%. Average farm income per household also increased by 51.4% between 1963 and 1975 and the Gini coefficient in income in rural areas was at a low level of 0.298. Poverty was thus reduced at a fast rate of 20% per decade between 1945 and 1950 and 10% per decade from 1965 to 1978 (El-Ghonemy, *ibid*).

Land Reform in Latin America and Africa gives mixed results of their impacts on poverty and food security. This can be attributed to the fact that most of the land reform programmes in Latin America and Africa have been partial reforms in the sense that land redistribution was the main focus and not much support was given to beneficiaries. This is in contrast to most land reform programmes in East Asia, where additional support was an important part of the programme. In addition most land reform programmes in Latin America and Africa adopted collective production for beneficiaries rather than focusing on individual farmers. These differences are important in understanding the effect of land reform in different parts of the world as they interact with other internal and external production and market conditions. Additional support for land reform beneficiaries is therefore important.

## **8 Effects of Government Provision of Work Programs**

There is very little evidence of the effects on food security of governments' direct provision of support using work programs. However, Effects of food-for-work programs in rural Kenya, which differ from those from Zimbabwe, indicate that program participants have net returns 52 percent higher than non-participants, most of which is due to induced effects of capital formation on own-farm production (Kinuya, 2004). Greater capital formation increased the opportunity cost of participants' time, encouraging a transition over time from food-for-work activities to greater own-farm production. Food for work increased food demand, employment, and marketable surplus. In this respect intervention, that gives direct experience and acumen seems to give impressive results in fostering downstream activities that leads to improved security. It is important to note that direct intervention of this type is only preferable in circumstances where self-employment opportunities are limited. In Zimbabwe food-for-work programs were poorly resourced and very short-term, therefore, they did not foster any real learning or income potential. They were just meant to bridge a temporary labour shortage at particular times and were not even based on any thought out strategy.

## **9 Summary of success factors**

Access to livelihood assets, strong institutional support and a favourable external environment plays a crucial role in small holder agriculture's ability to produce and significantly contribute towards reducing food insecurity. Where producers lack extension services, for example, yields can be as low as 20% of total possible (Malawi) and a lack of draught power leading to delays in planting (or other operations) can result in up to a 30% reduction in yield (Zimbabwe)<sup>5</sup>. These decreases also affect labour participation rates and tends to drive people (mostly youth) out of the sector.

---

<sup>5</sup> In Zimbabwe, it was established that a 6 weeks delay in the planting of maize leads to a drop in yield of up to 30% (DRSS, 1994).



Infrastructure and extension provide a much more complex challenge. In addressing food security issues in Kenya it was recognized that there are many extension service providers within Government, NGOs, private sector, religious organizations and community based organizations. There are also considerable resources (human, physical and financial), held by these organizations. However, their use is uncoordinated with little impact to the communities towards which they are directed. The consistency and regularity by which farmers are assured of these resources affect their effectiveness (Kinyua, 2004). It has already been established that extension visits can change farmers output by more than 25% depending on the level of education of the farmer. In Zambia and Malawi it has been shown that a single extension visit can increase food production when coupled with optimal productive assets. This increases labour use by more than a third (Diao, 2007). The Zimbabwean success story of the 1980s mentioned earlier in section 5 was heavily influenced by close coordination of all services affecting the production activity including appropriate research and development but crucially, an expanded extension service that was parallel to none in Africa (Eicher, 1995).

Empirical work in Malawi and Zimbabwe and Indian econometric work using farm-household, rural economy and CGE models to analyze the structure of different rural livelihoods and to simulate policy impacts on livelihoods, rural growth and poverty, highlighted very diverse constraints, opportunities and behavior among different household types and confirmed the importance of smallholder agricultural growth for poverty reduction through its impacts on labour and grain markets (even where it accounts for less than 50% of rural incomes). However, large productivity increases are needed from labour saving technical change if smallholder agriculture is to drive pro-poor growth (Dorward, et. al., 2006)

## 10 Conclusion

Evidence of own production as a means to achieve food security from the region is patchy and contextual, with some countries (eg Zimbabwe, Malawi, Kenya) experiencing increases (in some circumstances) and decreases (in others). It is clear that with a stable macroeconomy and strong consistence policies on institutional support, production of food and other agricultural commodities can improve the food security situation of poor households. Efforts to boost agricultural production must focus largely on increasing smallholder production and their livelihood options. Realizing the potential of food and agricultural production in reducing poverty and hunger depends largely on the extent to which smallholder farmers, are able to participate in productive and remunerative farming and off-farm activities. However, poor results of interventions occurred when policies were not complementary and/or were inconsistent with the pertaining macroeconomic environment.

The high levels of hunger in the world, particularly in the rural farm household sector and the difficulties in reducing it even when food supplies are high highlight a fundamental problem of access to food. Even low food prices will not fully address the problem of inadequate access to food, which is also affected by the ability of the poor to produce enough food and/or generate sufficient income to buy it.

## Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

Additionally, since most poor rural households rely on agricultural production for a significant share of their income, increasing agricultural productivity is intimately related to reducing food insecurity and rural poverty. This requires attention to the totality of livelihoods assets available and accessible to households. It follows that increasing food production and productivity should go beyond the objective of reducing market prices but seek to improve access and availability within the household.

Policies to support smallholder productivity including increased access to land and institutional support boosts food availability and lower local food prices, generating higher incomes and increased demand for locally produced goods and services, resulting in broad-based socio-economic development in rural areas. This is the primary reason why agricultural growth is more effective in reducing poverty compared with growth in other sectors. Moreover, policies promoting smallholders and more equitable land distribution were at the heart of country success stories during the green revolution in several Asian countries (e.g. China, India and Indonesia) but this has to be accompanied by:

- Appropriate and high yielding agricultural technologies
- Local markets offering stable output prices
- Seasonal finance for purchased inputs
- Infrastructure to support input, output and financial markets
- Associated state investment in infrastructure, research and extension, plus
- Interventions such as price stabilization, input supply, guaranteeing procurement, and credit subsidy, where necessary

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

**References**

- Chirwa E., A Dorward and J Kydd, 2007. Reforming the Smallholder Coffee Sector in Malawi: A Case Study of Smallholder Commercialization. <http://www.futureagricultures>.
- Dardel P., R. Mano. 2004. Determinants of Food Insecurity and Policy Response to Famine Situation in Southern Africa. FANRPAN /FAO Joint Publication.
- DFID/FAO, 2000, *Inter-Agency Experience and Lessons: from the Forum on Operationalizing Sustainable Livelihood Approaches*. Rome, Food and Agriculture Organization of the United Nations and Department for International Development (also available at [www.fao.org/docrep/x7749e/x7749e00.htm](http://www.fao.org/docrep/x7749e/x7749e00.htm)).
- Diao, X., P.B.R. Hazell, D. Resnick and J. Thurlow. 2007. The role of agriculture in development: implications for sub-Saharan Africa. Research Report No. 153. Washington, DC, IFPRI
- Dorward, A., Shenggen Fan, Jonathan Kydd, Hans Lofgren, Jamie Morrison, Colin Poulton, Neetha Rao, Laurence Smith, Hardwick Tchale, Sukhadeo Thorat, Ian Urey, and Peter Wobst. 2004. Institutions and Economic Policies for Pro-Poor Agricultural Growth. IFPRI DSGD Discussion Paper No. 15. November 2004.
- Dorward, A. and J. Kydd, 2004. The Malawi 2002 Food Crisis: The Rural Development Challenge. *Journal of Modern Africa Studies* 42(3): 343-361.
- Eicher, C. K., 1995. Zimbabwe's Maize Based Green Revolution: Pre-condition for Replication. *World Development Report*, 23, 805-818.
- El-Ghonemy, R.M. 1990. *The Political Economy of Rural Poverty: The Case of Land Reform*. Routledge, London and New York
- FAO, 2004. The State of Food Insecurity in the World. Washington DC.
- Kinyua, J. 2004. Assuring food and nutrition self-sufficiency in Africa by 2010: Prioritizing Action, Strengthening Actors, and Facilitating Partnerships. Conference on Food Security. Kampala 2 November 2004
- Bezunch M., B. J. Deaton and G. W. Norton, 1988. Food Aid Impacts in Rural Kenya *American Journal of Agricultural Economics*, Vol. 70, No. 1 (Feb., 1988), pp. 181-191
- Rukuni, M., Patrick Tawonzvi, Carl Eicher with Mabel Hungwe and Prosper Matondi. 2006. *Zimbabwe's Agricultural Revolution Revisited*. University of Zimbabwe Press.
- Mellor, D. 1984. *Agriculture in Development*. Oxford University Press. London New York.

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan Africa

---

McCalla, Alex F. 1997. From Subsistence Systems to Commercial Agriculture: The Need for a New Development Paradigm. *American Journal of Agricultural Economics*, Vol. 79, No. 2 (May, 1997), pp. 643-645

Mudimu, G. D. 1992. "Achieving and Maintaining National and Household Food Security: Zimbabwe's Experience and Issues for the 1990s". in C. Csaki, Th. J. Dams; D. Metzger; and J. van Zyl. (eds). *Agricultural Restructuring in Southern Africa*. International Association of Agricultural Economics. Windhoek.

Mudimu, G. and R. Bernstein (edit). 1992. *Household and National Food Security in Southern Africa*, University of Zimbabwe UZ/MSU Project Food Research in Southern Africa.

Poulton, C., Davies, R., Matshe, I. and Urey, I. 2006. "A Review of Zimbabwe's Agricultural Sector Policies 1980-2000". Research Project on Institution and Economic Policies for Pro-poor Agricultural Growth, DFID.

Poulton, C., J. Kydd, S. Wiggins, and A. Dorward. 2006. State intervention for food price stabilization in Africa: Can it work? *Food Policy* 31 (4): 342-356.

Rorhbach, David. D., *The Growth of Smallholder Maize Production in Zimbabwe: Causes and Implications for Food Security* (East Lansing: Dept. of Agr. Econ., Michigan State University, Unpublished Dissertation, 1988).

Rukuni, M. and C.K.Eicher. (eds.) 1994. *Zimbabwe's Agricultural Revolution* University of Zimbabwe Publications. Harare. SADC Food, Agriculture and Natural Resources.

Shackelton, C.M. and S.F. Shackelton, 1999. Direct Use Values of Savanna Resources: A Case Study of Bushbuckridge Lowveld in South Africa. *Journal of Tropical Forest Products*

Stanning, J. L. 1989. Policy Implications of Grain Marketing and Storage Decisions in Zimbabwe. In *Southern Africa Food Security Policy Options* (M. Rukuni & R. H. Bernstein, eds. Pp 329-358. University of Zimbabwe/Michigan State University Food Security Research Project, University of Zimbabwe, Harare.

Obwona, M. 2002. Determinants of technical efficiency differentials amongst small and medium scale farmers in Uganda. Economic Policy Research Centre, 2002.

Rosegrant and Hazell, 2000

World Development Report, 2008.

Contribution of Own-Production to Food Security: Evidence from Sub-Saharan  
Africa

---

