



Sustainable Agriculture: The Key to Inclusive Rural Transformation

A Comparative Study Based on Empirical Evidence from 20 Years of MISEREOR Partner Efforts in Uganda

Commissioned by MISEREOR/KZE



Executive Summary:

What is the issue ?

In Uganda and elsewhere in the world, there is an exponential increase in food demand coupled with dwindling fossil fuel reserves. This is likely to trigger an increase in world market food prices to record levels. While this poses a huge challenge to consumers worldwide, it is an opportunity for smallholder farmers in developing countries to increase food production and subsequently; incomes. This gives a new lease to agriculture and rural development sub-sectors which hitherto have been neglected; and thus calls for a solid approach to ignite a Structural Transformation process which will lead to a fundamental rural livelihoods. However; how government's and development partners can facilitate this transformation is subject to great debate.

The Government of Uganda and its funding partners like the Germany government recognize the role of agriculture in poverty reduction, food security enhancement and structure transformation. Both nations advocate for contract farming as a means to inclusive smallholder engagement in and benefit from remunerative markets. Contract farming requires considerable investment in pro-poor value chain development to reduce reliance on single crops and vulnerability to market shocks. However; the Ugandan policies do not address the complexities related to integrating smallholder rural farmers in markets with large scale actors. The German policies on the other hand present a hybrid of gentle and inclusive transformation (Table 1) that portrays hesitancy between fully advocating for smallholder eviction from agriculture and supporting their intensive commercialization efforts.

We argue that these options are not the most suitable drivers for the fundamental change required to transform smallholder farmers' livelihoods. This evidence based policy brief thus advocates for Sustainable Agriculture (SA) as an alternate option to drive structural transformation because it is economically viable, environmentally friendly and socially inclusive. It thus stands to benefit the rural poor and cause a fundamental and sustainable difference in their lives.

Context and importance of the problem

The 2008 food price hike will be remembered for causing a crisis that triggered riots and civil unrest in many low-income countries. The crisis paved a debate on how to sustain the growing global population in the future. Although prices for most food commodities temporarily recovered after the peak, it is expected that global population growth, increasing prosperity in emerging economies and rising energy costs will drive them up to substantially higher levels compared to the beginning of the century (WIGGINS AND KEATS 2013).

This scenario brought agriculture and rural development back on the international agenda as strong drivers for transformative rural development. Whether this entails transition from rural-agricultural to urban-industrial societies and thus, a replication of the development pattern experienced by the wealthy and currently emerging nations, is a subject of considerable debate. Rauch et al (2015) advance four structural transformation processes: (i) radical (ii) differentiated or gentle (iii) Inclusive and (iv) stabilization and autonomy (Table 1).

Context and Table 1: Scenarios for structural transformation (after Rauch et al. 2015) of the problem

	Radical Transformation	Differentiated or Gentle Transformation	Inclusive Transformation	Stabilization and autonomy
Basic Assumptions	Historical pattern of structural transformation fully replicable	Agricultural growth creates non-farm employment for many	Non-farm sector unable to generate sufficient employment	Replication of western structural transformation not desirable
Role of Smallholders	Mainly inferior and redundant	Majority to exit agriculture, others integrated into global markets	Majority able to intensify and compete in domestic and global markets	Integration into local and regional economies
Preferred farming system	Conventional, industrial agriculture	Conventional or sustainable agriculture	Preference for sustainable agric. if productivity gains possible	Clear preference for sustainable agriculture
Goal Criteria	Economic growth based on increased labour productivity	Economic growth, social inclusion relies on non-farm sector	Social inclusion, economic growth through increased area productivity and reduced risk	Self-sufficiency and autonomy for smallholders

While all four positions in the debate acknowledge that external risks as well as market and institutional deficiencies are the limiting factors for smallholder production rather than farm size, they explicitly disagree on a) the capability of small-scale farmers to take advantage of the recently improved market opportunities, b) the replicability of structural transformation as experienced in the Western world and parts of Asia c) their emphasis on either economic growth or social inclusion.

Else where; experiences of the green revolution and similar interventions for agricultural intensification and modernization; have come with negative repercussions on farmers' financial health, eco-system destruction and breakdown of social systems. Yet the need to stimulate and support agriculture-led growth to reduce poverty and eradicate hunger is equally recognized by governments, their development partners and civil society. A key question still abounds: can structural transformation be managed in an economically viable, environmentally friendly and socially inclusive manner with emphasis on benefit for the rural poor?

Existing National Policies

Orientation of the German Development Policy

The Federal Ministry for Economic Cooperation and Development (BMZ) has two major policies and one initiative that guide its support for emerging agricultural based economies. The Strategy on Rural Development and Food Security (2011) underscores transition from subsistence to sustainable commercial production through capacity strengthening and income diversification as a means of facilitating structural change.

The 2013 Strategy to promote SA further emphasizes poverty reduction, food security and resource conservation as means of triggering structural transformation in rural areas. It thus promotes contract farming and rural-urban migration as approaches for integrating smallholders' into remunerative value chains. However, while the strategy advocates for diversified production and eco-friendly resource use, it falls short in promoting environmentally sound farming methods.

While the "One World, No Hunger" (SEWOH) initiative of 2014 has structural transformation of rural areas as one of the six pillars, no distinct concept for its management has been outlined. While it explicitly does not support industrial agriculture, it lacks a clear commitment for socially inclusive rural economy development and favours market integration of smallholders' over self-reliance.

Hence, the discourse within German development policy features elements of both, differentiated and inclusive transformation which has been criticized for missing out on the actual target group and serving the interests of large-scale agribusinesses to the detriment of the rural poor.

Orientation of the Uganda Agricultural policy

Uganda renewed its interest in rural development with the commitment to the Comprehensive Africa Agriculture Development Programme in 2010 and launch of MAAIF's Development Strategy and Investment Plan (DISP) as well as the National Agricultural Policy (NAP).

The underlying assumption of these policies is that raised productivity will enable rural populations to engage in value chain-related non-farm activities and thus, prosperity will rise in the long run.

The DSIP largely focuses on increasing productivity and fostering market integration as they comprise 90% of the ASDISP's budget. The 2013 National Agriculture Policy reinforces the government's dedication to a market-oriented and private sector-led economy through promoting smallholder transition from subsistence to commercial farming and creating an enabling environment for private sector investment. However, while the policy emphasises promotion of production systems means to conserve and utilize national resources, this strategic area only accounts for just 0.8% of the total agricultural budget. In comparison, the Draft National Fertilizer Investment Strategy and Investment Plan (NFS) has been allocated 4% of the budget for fertilizer grants. This reveals clear policy priorities in favour of chemical

rather than biological inputs.

The current policy framework thus cannot provide a sophisticated answer to the diverse and complex realities of smallholders which is indispensable to ensure social inclusiveness. On the contrary, civil society organisations, have accused the investor-friendly approach to have invited cases of “Land Grabbing” resulting in the radical displacement of small-scale farming households.

Sustainable agriculture: a viable structural transformation option? Evidence from practitioners

A study was conducted to review the performance of SA farmers supported by MISEREOR partners in 10 districts in Uganda. The study was based on two long term evaluations done in 2005 and 2015 and targeted 714 farmers (252 SA, 252 conventional and 210 contract tea farmers). We presented our findings in six themes as outlined below:

Local risks and challenges

Participants across all three groups ranked their main challenges in a similar with lack of capital, climate-related hazards and pests and crop diseases being most dominant. Tea farmers were particularly exposed to market-related risks including low tea prices, high input costs. This resulted in far-reaching loss of the promised benefits from contract farming. In comparison, access to inputs and extension services which had been ranked as fourth and eighth challenges by SA farmers in 2005; did feature in the 2015 study. Conventional and contract farmers had limited access to extension services and depended on the media (Table 2). Thus locally-adapted means of sustainable farm management proved to offer a viable alternative to conventional or industrial agriculture.

Level of smallholder satisfaction with extension providers (Best or second best option)

Service Provider	Reference %	SA %	Outgrowers %
MISEREOR Partner	n.a.	98.0	n.a.
Government (NAADS)	41.3	45.6	23.8

Contract farmers were only included in the second study

Media	60.3	20.6	58.1
Private Sector	5.2	1.2	21.9
Other NGOs	11.5	14.7	21.4

Factors of production

Scarcity of land was cited by all smallholders. Results indicate an overall 38% decline of land cultivated. Conventional farmers lost more than half of its land while SA farmers were able to maintain 82% at least. Today, they own twice as much as their counterparts. Labour shortages were compounded by youth migration to urban centers and affected all participants. 50% of SA and contract farmers were able to afford extra labour as compared to 25% of conventional farmers. Also, 25% SA farmers were able to afford permanent labour as compared to 10% of the other two groups. Though SA practices have been criticized for drudgery, SA farmers appear to better manage labour needs in the longer term.

Production systems

SA farmers averagely cultivate 23 crops compared to 15 for the conventional and 18 for the outgrowers. Thus crop diversity was generally 50% higher on SA farms. SA farming systems tend to be more diverse and intensified than conventional as well as outgrower systems with regards to livestock and fruit trees. Comprehensive and context-sensitive service provision enabled SA farmers to withstand negative external trends.

Farm Output

Decreasing plot sizes affected earlier successes in enhancing agrobiodiversity by SA farmers. Moreover, average staple crop production declined dramatically due to the banana wilt disease (Tab 3). Nonetheless, efforts in promoting organic pest management and soil fertility management methods resulted in considerable gains on the less productive SA farms. Similar trends are observable for livestock whereby SA adopters own significantly more than the other two groups. Chemical inputs, albeit increasingly used by the better off among all farmers, did not prove to have a positive impact on crop yields. Tea outgrowers had higher participation in collective marketing closely followed by SA (Table 3).

Tab 3: Participation in collective marketing groups

	Conventional	SA	Outgrower
Male (%)	1.9	36.3	47.7
Female (%)	4.8	32.9	17.5

Food security

Remarkable improvements were made in the field of nutrition as diets within SA farmer households became much more diverse and domestic practices related to water and sanitation were improved. More than 80% of SA farmers had access to ample amounts of food in the period 2011-2014 compared to just 60% of outgrowers and 54% of the conventional farmers. Apart from education, crop diversity and organic pest management proved to be the main drivers of enhanced availability and quality of food. As a result, the vast majority of households embracing integrated and environmentally sound production systems were considered food secure.

Income and expenditure

The monetary advantage of sustainable agriculture over conventional and tea farmers manifests itself in terms of both home consumption values and cash income from farming activities. The median grand annual total income of a SA household was US\$ 8M which is greater than that of P4 medium level teachers in rural areas (US\$ 7.3M). The benefits were most evident among the lower income groups and on farms of less than two acres (Tab. 4) as these comprehensively manage integrated production systems through sole utilization of family labour. Education, marketing and access to land contributed to increased income across all groups. Due to their favourable situation, SA farmers spent less on basic aliments, had greater ability to invest in non-food items and increase savings.

Tab. 4: Total net income per acre cultivated

Acres	Conventional (US\$)	SA (US\$)	Outgrower (US\$)
<=1	1,889,400	3,952,500	1,487,100
1-2	878,231	2,258,300	1,110,400
2-4	692,966	1,333,900	965,922
>4	615,378	773,048	552,925

These findings demonstrate that environmentally friendly and socially inclusive means of agricultural intensification can trigger rural growth and therefore have the potential to facilitate structural transformation. However, an inclusive transformation by means of sustainable agriculture will most likely realize its full potential under altered institutional and economic framework conditions.

Policy and practice recommendations

We recommend policy changes at three levels: for Non-government promoters of SA, the BMZ and Uganda Government.

SA CSOs/NGOs

- Emphasize livestock integration including zero-grazing and forage development in extension messages to compensate for the detrimental effects of land fragmentation.
- Intensify promotion of marketing and processing for farmers since participation in marketing groups showed tremendous effects for income generation.
- Facilitate farmer-led research on possible ways to combat the banana wilt disease.
- Acknowledge increased fertilizer use among SA farmers and devise strategies to support access to organic fertilizer recommended practices. Support mechanization to reduce drudgery and herbicide use

MAAIF

- Revise the NAP, the DSIP and sector policies in order to recognize and support resource-poor smallholders to boost area productivity through sustainable intensification and develop tailored approaches for their support. This should also entail the review of existing inheritance and land rights policies to stop further land fragmentation.
- Increase public investment in agriculture and fulfil the commitments made to the Comprehensive Africa Agriculture Development Programme. The additional funds should be used to strengthen public extension services delivery and rural infrastructure among others.
- Acknowledge the endogenous potential of smallholders to stimulate agricultural growth as illustrated by the remarkable successes shown in this study and thus, review the role of large national and foreign investors in the respective policies. Review existing smallholder contract farming agreements and support development of safety measures to reduce farmers' vulnerability to market-related risks.
- Shift current policy focus from fertilizer promotion as a means of agricultural intensification to more environmentally sound approaches. Fertilizers should only be promoted in small and targeted doses based on comprehensive assessments of local soil quality, water availability and crop requirements not as a panacea to

increase productivity.

- Scrutinize the current optimism regarding tea outgrower schemes against the backdrop of this study's empirical results and the climate change projections. Reorient agricultural policy towards alternative crops which contribute to national food security, entail less market risks for farmers and are more climate-resilient.

German government through the Federal Ministry for Economic Cooperation and Development (BMZ)

- Develop a strategic document on how to support socially inclusive, economically viable and environmentally sound structural transformation in developing countries to guide current and future interventions of German international cooperation in the fields of agriculture, food security and rural development. The new policy would benefit from close consultation with civil society which can contribute valuable field experiences.
- Give greater emphasis to organic farming methods making them the primary technical approach of German international cooperation. This does not mean to completely abandon conventional farming methods but to evaluate their appropriateness for local contexts more thoroughly.
- Shift focus of development policy from contract farming to cooperatives and other forms of farmer organisation. These grant greater self-reliance, participation and flexibility to their members and offer ways to hold their partners accountable.
- Ensure that ongoing cooperation and value chain development programmes, integrate resource-poor farmers and their households; and build their capacity to meet buyer requirements.
- Where contract farming is bound to extensive specialisation, make the existence of social safety nets towards climate and market risks a compulsory requirement for funding and other means by support on behalf of the German federal government.

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