

# Factors Influencing Smallholder Commercial Farming in Malawi: A Case of NASFAM Commercialisation Initiatives

## Introduction

Most of smallholder farming in Malawi focuses on producing food staples such as maize and rice for own consumption. The dominance of subsistence farming with traditional farming systems in the smallholder sector is one of the concerns in achieving agricultural productivity. The smallholder agriculture sector in Malawi remains unprofitable and is characterised by low uptake of improved farm inputs, weak links to markets, high transport costs, few farmer organizations, poor quality control and lack of information on markets and prices. There are several initiatives by state and non-state actors that aim at promoting intensification and commercialisation of smallholder farming. One of the organisations spearheading the

commercialisation of smallholder farming is the National Smallholder Farmers' Association of Malawi (NASFAM), a farmer –based organisation.

Commercialisation of agriculture takes many forms and is defined in different ways. Smallholder commercialisation in agriculture can be defined in terms of smallholder participation in commercial input and output markets, type of crops grown by smallholder farmers and goals of smallholder farmers.

We used the farmers' objective and participation in output markets as working definitions for commercialisation. At household level, the extent to which smallholder farmers commercialise depends on agro-climatic

conditions and risks; access to markets and infrastructure; community and household resource endowments; input and factor markets; laws and institutions; cultural and social factors affecting consumption preferences, production and market opportunities and constraints.

There are also exogenous forces that drive commercialization and these include population and demographic change, urbanisation, availability of new technologies, infrastructure and market creation, macroeconomic and trade policies. These factors affect commercialisation by altering the conditions of commodity supply and demand, output and input prices, transaction costs and risks that farmers, traders and others in the agricultural production and marketing system have to cope with. One of the factors that can affect participation of smallholder farmers in commercialisation of their agricultural activities is the risk of food insecurity. For instance, if the risk to food insecurity is high, say through high and unpredictable prices for food, farmers may choose to produce their own food rather than rely on the market. This policy brief explores

the importance of food security in households' decision to participate in commercialisation initiatives.

## NASFAM commercialisation initiatives and food security

NASFAM offers several services to smallholder farmers including extension services, input access, market access and policy advocacy. In addition, NASFAM promotes commercialisation through changing the mindset of the smallholder farmers from mere subsistence farming to farming as business (commercial farming) (see Box 1). Survey data was collected between October and November, 2009 through a household questionnaire administered to 300 households, and focus group discussions in eight communities.

The survey was conducted in areas where NASFAM associations had experienced natural growth in the farming season of 2008/09; targeting households that had one year experience with the organisation and

### Household characteristics (mean values)

Variables	Participant		Non-Participant	
	Before intervention (2007/08)	After intervention (2008/09)	Before intervention (2007/08)	After intervention (2008/09)
Household size (adult equivalents)	-	5.21	-	4.13
Years of schooling	-	5.99	-	5.05
Total land cultivated	3.14	2.39	2.33	1.80
Value of assets (Mk)	67,366	76,273	23,431	26,870
Household hired in labour (0/1)	0.30	0.46	0.20	0.31
Total hired labour man days	23.6	54.9	19.7	43.5
Total family labour man days	70.5	155	72.8	122

## Box 1: NASFAM and Smallholder Commercialisation in Malawi

NASFAM was created in 1994 out of the Smallholder Agriculture Development Project funded by the United States Agency for International Development (USAID) to organize smallholder tobacco production. Over the years, the mandate extended to diversification into the production of other cash and food crops including groundnuts, rice, chilli, cotton, soya and other legumes. The vision of NASFAM is to promote farming as a business among smallholder farmers. It draws its membership from smallholder farmers who usually cultivate less than 1 hectare of land, producing 60 percent food and 40 percent cash crops and use a hand hoe as their main tool for farming activities. The organisation of NASFAM has grown in terms of membership, geographical coverage, scope of services and the coverage of crops.

The extension network of NASFAM is organised such that the smallest operational unit is the Club, made up of 10-15 individual farmers. Clubs combine to form Action Groups which are the key points in the extension network for dissemination of information to members and the bulking of member crops. Action Groups in turn combine to form NASFAM associations which are legally registered entities, member-owned and managed by farmer boards.

NASFAM offers several services to their members including training and capacity building in farming activities and management of associations, facilitating access to farming inputs, market access and crop marketing, extension services and advocates policy changes.

The membership has grown to 110,000 smallholder farmers across the country. Groundnuts, that have always been a smallholder cash crop, have reappeared as an export crop, a situation attributed largely to the NASFAM. Some of the associations involved in groundnuts cultivation have a fair trade label, which enables them export the groundnuts at a premium.

non-members in Ntchisi and Nkhotakota Districts in Central Malawi. Two-stage random sampling per Group Action Committee (GAC) (see Box 1) was used to draw up a list of households to constitute the sampling frame. In each GAC with an average membership of 30, 20 members were randomly selected. A total of 5 GACs were interviewed in each of the districts. The survey applied snow-balling method to identify non-members.

In terms of household characteristics, it turned out that most farming households are less educated and ranked their well-being as poor. The participating farming households produced

more market-oriented crops such as tobacco than non-participants, although households tend to devote more land to cultivation of food crops. Some of the farmers sold part of their maize but a greater proportion of maize was sold in the beginning of the marketing season which made households vulnerable to the effects of changes in food prices especially where realised harvests were not sufficient to meet household requirements.

Overall farmers committed less land to cultivation with slightly higher proportion of land cultivated by participating farmers. Among other reasons for the reduction of land

cultivated in 2008/09 include unavailability of land (stated by 48 percent of the participants), labour constraints (16 percent), land rented out (12.9 percent), water logged land (3.2 percent) and 3.2 percent left their land fallow.

Participating farmers used more family labour man days than non-participants though statistically significant larger amounts of their money were spent on farm inputs and labour. Most farming households rely on subsidized fertilizers in addition to investments in commercial purchases through cash and credit. However, 95 percent of participating households applied fertilizer compared to 88 percent of non-participating households.

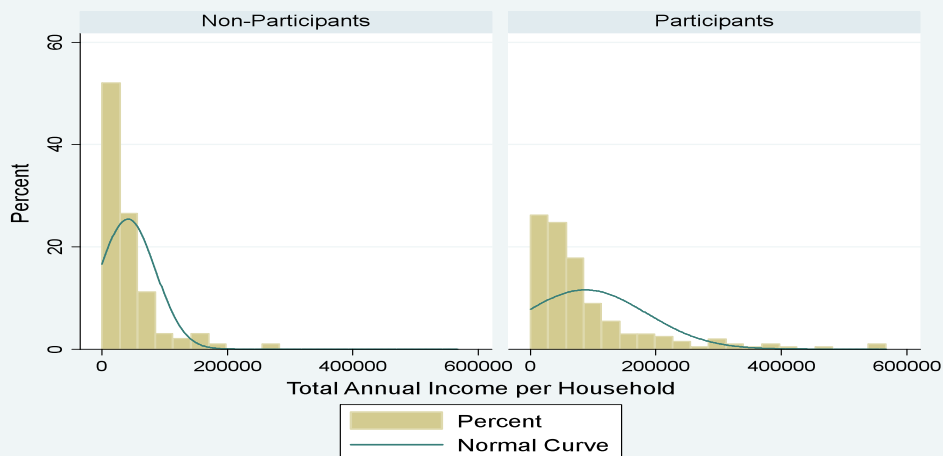
Non-farm income remains prominent in the household overall income sources including ganyu (casual labour) wages and remittances. Participating households' income and food security indicators were higher than those of non-participants. For instance, participants had to cope more in 2007/08 before intervention

than after the intervention to commercialise in 2008/09. In addition, the proportion of households rating themselves as poor and/or in the ultra poor category declined after joining the initiative. Figure 1 shows the distribution of total household incomes by household status in 2008/09.

The figures show that all distributions are right skewed, but the income distribution among participants is much flatter than the income distribution of non-participants implying wide dispersion of income among participating households. On average participant households had an annual income of MK87,634 [US\$626] or MK19,072 [US\$136] per adult equivalent per year compared to MK41,414 [US\$296] or MK 11,531 [US\$82] per adult equivalent for non-participant households.

The cropping patterns among the farming households are driven by food security concerns. The largest percentage of land is allocated to

**Figure 1 Distribution of Annual Income by Household Status**



food crops. Such behaviour could have several explanations, including risk reduction, taste preferences for local varieties, market transactions and more importantly lack of confidence in food markets. Yet even so, realised harvests are not sufficient to meet household food requirements; hence the fraction of household expenditure on food is high. This implies that household consumption will be largely affected by changes in prices of food.

Access to functional markets for participants as well as non-participating households would help mitigate food security concerns and allow households to choose higher value production patterns.

## Participation in NASFAM commercialisation initiatives

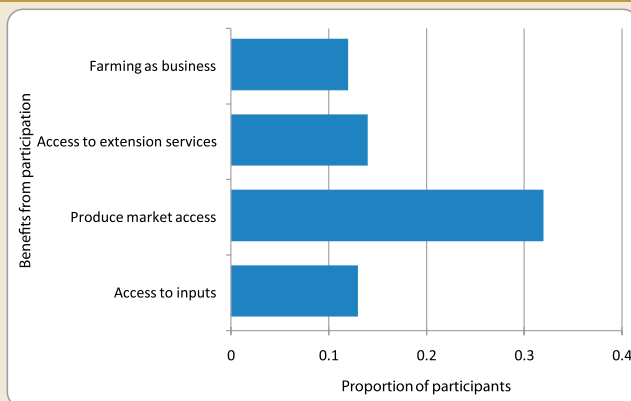
Participating in farmer organisations has the potential to secure better prices for produce, lower prices for inputs as associations could buy in bulk to making available technical assistance and technology that allows participating farmers harvest higher yields. Figure 2 below shows that farmers had access to inputs and markets for their produce, received extension advice and benefited from the change in orientation to

farming as a business. The most important benefit is market access for agricultural produce, which is consistent with the commercial orientation of NASFAM activities.

The results also suggest that the change in the mind set from subsistence farming to commercial farming through change of objectives is considered an important benefit but was only clearly articulated by about 12 percent of participants.

Several factors motivated farmers to join NASFAM, according to Focus Group Discussions. Farmers were motivated by potential reduction in transportation costs to markets for their tobacco; produce market access especially that NASFAM was involved in buying farmers' produce — groundnuts and soya beans — at good prices; access to extension services and linkages with other farmer institutions. Others mentioned that they joined having seen fellow farmers' livelihoods improving with club membership. Food security did not play a major role in the decision to participate in NASFAM commercialisation initiatives, with only 25 percent of participating farmers being influenced by increased food adequacy to join NASFAM.

**Figure 2 Most important benefits from NASFAM membership**



Participation in NASFAM commercialisation initiatives through membership by smallholder farmers is voluntary. NASFAM markets its services to potential smallholder farmers, and based on the information smallholder farmers make their decision whether to participate or not to participate. It is worth noting that prior to NASFAM several farmers were already selling some of their agricultural produce, hence they were commercialized. Participation in NASFAM activities may have enhanced their degree of commercialisation.

Using data prior to joining NASFAM, farmers' decisions to participate in NASFAM commercialisation initiatives were significantly influenced by the following factors:

- Gender of household head — farmers from male-headed households are more likely to participate than members from female-headed household. This gender differentiation results from biases in access to various forms of capital against female-headed households. It is well-known in Malawi that female-headed households are poor and one of the vulnerable groups relative to male-headed households;
- Household size and family labour — households with plenty of labour are more likely to commercialize;
- Wealth plays a crucial role among smallholder farmers in decision to participate in farmer organisation and commercialisation initiatives. Wealth represents a resource base that facilitates affordability of farm inputs as well as smoothes consumption of participating farmers in periods when food requirements are not met; and,
- Food security — households that were food secure were more likely to participate in

NASFAM commercialisation initiatives and had higher levels of commercialisation, their probability of participation increases by 12 percent.

## Determinants of degree of commercialisation

The extent to which smallholder farmers commercialize depends on many factors including age of household heads, household size, food security, access to fertilizers and benefits derived from participation in farmer organisations. The results from a regression model of the degree of commercialisation, measured by the share of total agricultural output that is sold, while controlling for selectivity biases in membership to NASFAM commercialisation activities suggest that access to inputs and markets are critical factors associated with the degree of commercialisation.

More specifically, access to fertilizer positively affects the degree of commercialisation, but access to fertilizer by credit has a higher impact on commercialisation compared to access to fertilizers through subsidy or cash purchase. The lower marginal effects of subsidized fertilizers and cash purchases may also reflect the limited amounts of fertilizer acquired by the households using these methods, but also the greater incentives for commercialisation imposed by the credit market.

Secondly, younger farmers tend to have a higher degree of commercialisation compared to older farmers. This result is reinforced by the number of adult equivalent household members which is negatively associated with commercialisation. This suggests that although large household size positively affect participation in commercial markets, it can negatively affect the extent of commercialisation particularly due to household specialisation in

own food production. Older household heads are more likely to have larger household sizes, which despite their labour availability advantage, increases the food requirements of households.

Thirdly, there is a significant positive relationship between food security prior to participation in NASFAM activities and the extent of commercialisation. Households that self-reported that they were food secure were on average 9 percent more commercialised than food insecure households. This underscores the important role of food security as a push factor in smallholder commercialisation particularly in environments characterized by high seasonal maize price volatility.

Finally, the role of NASFAM membership and farmer's appreciation of benefits from participating in NASFAM commercial initiatives are also critical in understanding the degree of commercialisation. Farmers' appreciation of NASFAM core service — orientation of smallholder farmers toward the concept of farming as business and facilitating market access — are motivating factors for the commercialisation of smallholder farmers. Compared to non-participants, households that indicated that the most important benefit from NASFAM activities was commercial orientation of their farming were 19 percent more commercialized, higher than the 17 percent margin for those who indicated market access as their major benefit and 9 percent for those that indicated extension services.

## Conclusion

The approach to smallholder intensification and commercialisation being promoted by NASFAM presents lessons that can be learned in order to increase agricultural productivity and

profitability. Farmer organisations continue to be vital in facilitating farmers' commercialisation. The results highlight the importance of supporting the development of farmer organisations, such as NASFAM, that provide capacity building training to smallholder farmers in business management and promote market access. However, the decision to participate and extent of commercialisation is hampered by credit market constraints, food insecurity and biases arising out of gender differentiation evident in ownership of assets such as limited access to land, capital and greater domestic responsibilities for women which reduce the labour available for farming.

Micro-credit would increase farmers' access to resources and inputs that enable them raise their productivity or scale up their existing activities and enter markets. The implications of food insecurity on attempts to commercialise should be considered comprehensively in programmes. Policy makers should give much emphasis to creating access to stable food markets which in their absence farmers may be constrained in their attempt to commercialize their farming systems.

Food markets in Malawi can be made functional by addressing the constraints that private traders face such as storage, access to capital, poor infrastructure, and unpredictable government interventions among others since these limits inter-seasonal movement of maize and integration of markets.

The main lesson for similar initiatives is that a more targeted approach, focusing on female farmers and addressing their constraints to market participation, such as access to credit, will have positive spill over effects for their household's welfare. In addition, the results call for investing in the young farmer especially

given the rising levels of unemployment and underemployment for young people. Agriculture has the potential to provide young people and others in rural areas with reasonable livelihood and reduce the increased vulnerability associated with rural-urban migration such as limited employment prospects.

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