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HAVE MARKET POLICIES TURNED MALAWI'S LARGE-SCALE FARMERS INTO SUBSISTENCE MAIZE PRODUCERS?

Brent Edelman, Athur Mabiso, Zephania Nyirenda, and Cynthia Kazembe

In the last two decades, food security policy in Malawi has focused on enhancing the maize productivity of smallholder farmers, primarily through the Farm Input Subsidy Programme (FISP) (Chirwa and Dorward 2013). While this has raised maize yields, production shocks, such as droughts and floods, continue to result in widespread food insecurity in the country. In 2014/15, for example, a delayed onset of the rainy season, coupled with dry spells and flooding in different parts of the country, reduced maize production by about 30 percent (MoAIWD 2016), resulting in 2.8 million people requiring emergency food assistance (FEWSNET 2015). At the time of writing in mid-2016, the effects of El Niño were predicted to reduce maize production further. Government estimated maize production to be 2.4 million metric tons for the 2015/16 season, the lowest since FISP was introduced in 2005/06 (MoAIWD 2016). Even more Malawians are likely to be pushed into food insecurity.[1]

Prospects of reliably achieving national maize self-sufficiency under the status quo seem unlikely given the susceptibility of the rain-fed maize production system to weather and other exogenous shocks. One reason why Malawi continues to face food insecurity in spite of FISP is its heavy reliance on smallholder, rain-fed maize production that is characterized by a single growing season, low productivity, and has a production objective that is largely subsistence for own consumption within the producing household. From 2005/06 to 2014/15, 96 percent of Malawi's maize was produced by smallholder farmers, yet smallholder yields (1.0 to 1.7 mt per ha (Dorward and Chirwa 2010)) lag behind those of large-scale farmers (2.1 to 4.3 mt per ha (MoAIWD 2016)). In addition, large-scale farmers tend to achieve higher yields during drought years as they have better access to improved inputs and irrigation than do smallholders (MoAIWD 2015). This implies that if there were more large-scale maize producers in Malawi there would be increased maize availability and more resilience to maize production shocks at national level.

But why is it that large-scale producers do not significantly engage in commercial maize production? After all, maize is a staple food not just for Malawi but for neighboring Zambia, Tanzania, Mozambique, and Zimbabwe (FEWSNET 2016), suggesting that there is large and accessible market demand in the region. In addition, Malawi has a readily available domestic market for maize: Over 80 percent of Malawians derive more than half of their calories from maize and the average individual purchases 72 kg of maize per year, for a total of approximately one million mt of maize purchased at the market each year. With such domestic and regional demand for maize, it is perhaps surprising that large-scale producers in Malawi are reluctant to grow maize. This is in sharp contrast to large-scale maize producers in Zambia and South Africa, who exploit regional maize market opportunities.

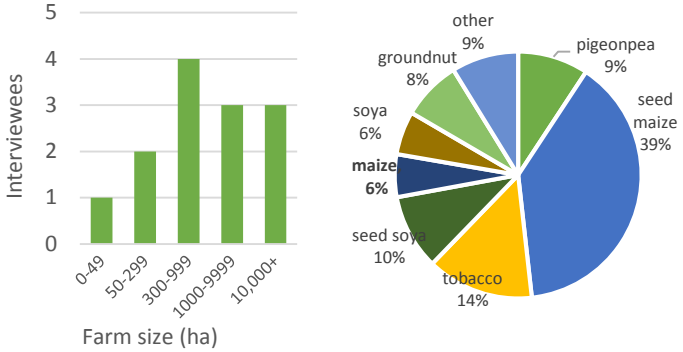
This policy note summarizes the findings from a 2015/16 IFPRI qualitative study that explored why commercial maize production is so limited in Malawi. The study focuses on current maize production by large-scale farmers and their maize market participation, the factors that limit their maize production, and what might be done to provide sufficient incentives for large-scale maize production in the short and medium terms.

METHODOLOGY

This study used qualitative methods involving in-depth structured interviews with 15 large-scale agricultural producers in Malawi. A criterion sampling strategy was used to identify interviewees with rich information on the key topics of interest (Cohen and Crabtree 2006), and interviews continued until saturation was reached.[2] The semi-structured interviews were recorded and transcribed. Transcriptions were then searched iteratively using text-based coding to extract themes and identify typologies on topics of interest, including crop allocation and marketing decisions, factors that constrain maize production, and supply response if granted increased market access, among others.

Of the 15 large-scale producers interviewed, ten cultivate 300 ha or more per year (left chart in Figure 1). Leading crops produced include seed maize (39 percent), tobacco (14 percent), seed soya (10 percent) and pigeonpea (9 percent). However, non-seed maize represents only 6 percent of overall land allocation (right chart in Figure 1).

Figure 1: Area under cultivation (left) and crop allocation by area (right) for large-scale producers in study sample



Source: Interviews (2016).
Note that for the left chart two large-scale producers did not report hectares under cultivation. These producers were engaged solely in contract farming.

[1] The research behind this policy note relied upon the gracious financial support provided by the Ministry of Industry and Trade of the government of Malawi using funds made available through the Agriculture Sector Wide Approach Support Project and by the Malawi mission of United States Agency for International Development (USAID) through its New Alliance Policy Acceleration Support (NAPAS) and Strengthening Evidence-Based Agricultural Policy (SEBAP) projects.

[2] While 15 interviews is a small sample relative to those commonly used for quantitative studies, keep in mind that this is a qualitative study. A sequence of interviews were conducted until a saturation point was reached, i.e., we observed strong repetition of themes and ideas across interviews and additional interviews were generating few additional insights. See Cohen and Crabtree (2006) for more information on qualitative research methods.

MAIN FINDINGS

Based on the qualitative analysis, three key findings emerged regarding how large-scale commercial farmers produce and market maize. These are:

Key finding #1: Large-scale farmers treat maize like small-scale farmers do: They behave as "subsistence farmers" of maize and produce just enough for "own" consumption, but not more.

Studies have reported that smallholder farmers in Malawi produce little maize surplus for the market (Jayne et al. 2010; Pauw and Edelman 2015). Similarly, large-scale farmers in our study produce minimal marketable maize grain surpluses. Overall, the large-scale farmers interviewed produced approximately 20,000 mt of maize in 2014/15. Of this, 84 percent was seed maize and 16 percent maize grain, i.e., non-seed maize, that could potentially be marketed. Of the maize grain produced by the sample farmers, less than 3 percent (76 mt) was marketed. Nearly all was held back for "own" consumption needs – rations for farm staff primarily.

From the qualitative analysis, two typologies on how large-scale producers approached maize emerged. The first typology, classified as those who "self-subsist," is characterized by farmers who grow maize for their own laborers but express reluctance to produce a surplus for the market – ten of the large-scale farmers sampled fit this category. The second typology, classified as those who "avoid maize altogether," produce no maize at all. These five producers are all affiliated with specialized international agribusinesses.

Of the ten large-scale farmers in the "self-subsist" category, eight flagged low maize prices as a major reason for not producing surplus maize for the market. This response raises the question: Why not re-allocate land from maize production to higher-value crops and buy maize from the market for staff? In order to gain insight into this question, we conducted theme-based extractions from the interview transcripts on maize production and marketing decisions (Text Box 1). Large-scale farmers grow maize to ensure that their staff members have access to a reliable supply of maize throughout the lean season and do not have to spend time and effort searching for maize when stocks are scarce.

Text Box 1: Comments from large-scale producers on why they are reluctant to rely on maize markets

"The commercial maize we produce is not for sale, it is ration for our staff. This is because we have so many staff and we do not want them to go out to look for maize."

"Maize is grown on nonprofit for our employees. Only when we have a surplus we sell it. We have an internal policy where we have to ensure that our employees have access to cheap, sustainable food."

"We don't grow a lot of commercial maize, mostly for feeding our staff. We also pay staff in maize in the lean season (they are happy to get this)…I want to make sure I definitely have enough for the staff for the rainy season."

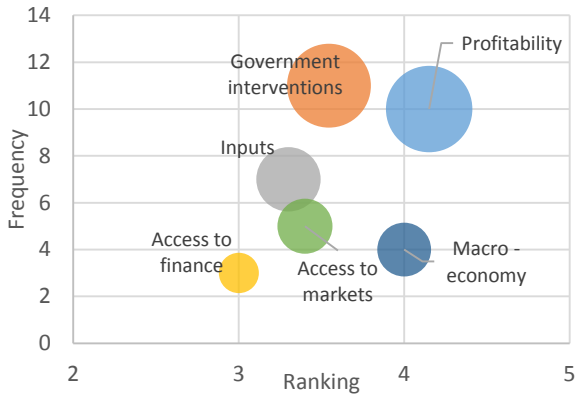
Source: Interviews (2016).

Just like smallholder farmers (NS0 2012), the large-scale producers that were interviewed are reluctant to rely on the market for maize for consumption purposes; rather, they grow maize to ensure access to a reliable supply of maize for their staff throughout the lean season. From a profit-maximizing perspective, this is a paradox as these large-scale, commercially-oriented producers appear to be violating a basic tenet of economic theory by allocating land to a crop that they themselves say is unprofitable. Rational profit maximizing large-scale farmers would be expected to allocate their land to higher-value crops for commercial purposes and to rely on the market for purchases of maize for own consumption. This enigma is perhaps explained by a general mistrust of the reliability of the maize market in Malawi and the uncertainty prevalent in this market, as discussed below.

Key finding #2: Unprofitability and unpredictable government interventions are the biggest constraints to producing maize for the market

To better understand the constraints to commercial large-scale maize production, producers were asked to discuss the various factors keeping them from allocating more land to commercial maize. They were also asked to rank each constraint on a scale of 1 to 5, with 5 being most serious or binding. The unprofitability of maize and government interventions in the maize value chain were cited as the most serious constraints to growing commercial maize for the market (Figure 2). While producers flagged government interventions slightly more often than unprofitability, they ranked unprofitability (average score of 4.2 out of 5) as a more serious constraint than government interventions (average score of 3.5). Other deterrents to commercial maize production cited included low-quality inputs for production; macroeconomic factors, like inflation and currency valuation; and limited access to markets, including export markets. Access to finance also emerged as a constraint, albeit less serious than the others.

Figure 2: Ranked constraints to commercial maize production



Source: Interviews (2016).
Note: Circle sizes are based on the product of ranking and frequency.

Specific reasons for the unprofitability of commercial maize production that were highlighted included low market prices for maize and high input costs. Theme-based extractions from the interview transcripts on maize production and profitability illustrate this point (Text Box 2).

Text Box 2: Comments on why maize production is not profitable for large-scale producers

"I can grow a lot of maize this year without a contract but it will rot in my warehouse. Because at K80 or K100 per kg means I am selling my maize at a loss. … My growing cost will be higher than that."

"Maize production is just not profitable. The cost of production is high and yet we sell in domestic markets where the prices of maize are lower than the cost of production. This is why you will rarely find maize being commercially grown under estates."

"If the government created a good market price for the farmer, and not do the FISP, the farmer would sell the produce at a good price and be able to buy his own inputs. Also the Malawi maize is priced very low when compared on the international scale."

Source: Interviews (2016).

As evidenced in the last quote above, issues of maize profitability are difficult to disentangle from government interventions in the maize market. These interventions include FISP, export bans,

price controls, and ADMARC's market operations. Additional theme-based extractions from the interviews reinforce the perspectives of the large-scale producers on the adverse effects of government interventions on the profitability of commercial maize grain production (Text Box 3).

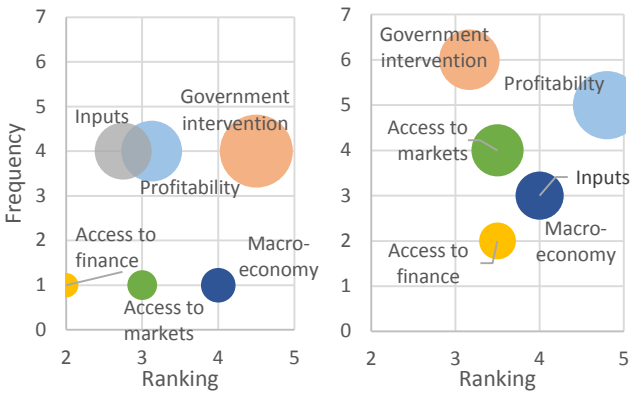
Text Box 3: Comments relating to government interventions discouraging large-scale commercial maize production

> "The market is being undermined by government policy related issues. Under this we have the FISP. … We are surrounded by smallholders who are given fertilizer for free, so their cost of production is much lower; this undermines us. We cannot compete commercially. So when you create a two tier system, deliberately, you eliminate the second tier…"
>
> "One of the biggest single issues [is] that we are not allowed to export maize. … I think this stops the farmers from growing because the price of maize is controlled."
>
> "The government set ADMARC price is too low so it is a disincentive to the farmers. Controlling the price by the government is a major disincentive. Traders could offer a good price, but the government comes in with the set ADMARC price. If traders try to pay more they are in trouble. This set price is a major disincentive."

Source: Interviews (2016).

Constraints to commercial maize production were further analyzed by dividing the sample into two farm-size categories: (1) 50 to 1000 ha and (2) more than 1000 ha. The first group of relatively smaller producers indicated that government interventions were the most serious constraint to commercial maize production, followed by profitability, inputs, and macroeconomic factors (Figure 3). Regarding government interventions, medium-scale producers were more likely to cite FISP and more general support to smallholder farmers as specific government interventions keeping them from producing more commercial maize.

Figure 3: Ranked constraints to commercial maize production disaggregated by farm size, 50 to 1,000 ha (left) and more than 1,000 ha (right)



Source: Interviews (2016).
Note that in the right chart, the symbols for 'Inputs' and 'Macro-economy' totally overlap.

In contrast, the larger producers highlighted profitability as the most binding constraint to commercial maize production. These very large scale farmers also indicated that government intervention was a deterrent to production, but ranked it lower than maize profitability. As opposed to the medium-scale producers who cited FISP, the larger producers more often cited export bans as the specific government policy keeping them from producing more commercial maize. These producers also flagged access to markets, macro-economic factors, and access to finance as barriers to commercial maize production.

Key finding #3: Access to the export market would increase commercial maize production, but in times of shortage producers would sell to government rather than export

The large-scale commercial producers were asked how they would allocate their land if government were to allow them to export maize in the upcoming season. If guaranteed access to the export market – either through an export license or a contract on which government signed-off – nine of the fifteen large-scale farmers indicated that they would increase the area of land they allocated to maize production. Of these nine, six specified how many additional hectares they would allocate to maize, which totaled to approximately 17,000 hectares. Based on these interviewees' own yield estimates, overall national commercial maize production would increase by at least 50,000 mt from just these six producers.

Interviewees were also asked if, in times of national shortage, they would be willing to sell to government instead of exporting. In the case of national maize shortage, eight of these nine large-scale farmers indicated that they would be willing to sell to government. They emphasized, however, that the terms and conditions of the transaction would need to be transparent and agreed upon consultatively. In particular, conditionality, i.e. the exact circumstances under which large-scale commercial producers would be requested to sell to government; price determination, i.e., how the price would be set, whether linked to regional prices or costs of production; and timing of payment would need to be clear and legally binding for both farmers and government.

CONCLUSIONS AND POLICY RECOMMENDATIONS

It is clear from the findings of this study that large-scale commercial producers in Malawi are reluctant to rely on the domestic maize market, be it for the commercial sale of their maize output or for purchases of maize for their employees. This is in large part due to uncertainty in the maize markets emanating from unconducive and unpredictable government interventions, including the maize export ban, price controls, unpredictable ADMARC operations, and FISP. As a result, large-scale producers who are more productive than smallholders and have more access to improved farm inputs and irrigation are unwilling to produce maize for the market. This implies that food insecurity in Malawi is likely to persist if government continues to intervene in ways that deter commercial production of maize.

The findings also highlight the general unprofitability of maize – particularly the low price of maize – as the principal reason why large-scale farmers in Malawi do not grow maize for the market. In some respects, these findings seem paradoxical and appear to be in contradiction to economic theory: If the large-scale producers cite low prices of maize as a major constraint to investing in commercial maize production, one would have expected them to simply buy the low-priced maize from the market to feed their employees. Yet they continue to allocate land to produce maize for feeding their workers – in essence behaving as subsistence maize farmers.

Finally, the study findings show that large-scale farmers are willing to allocate more land to maize if given an opportunity to export. Moreover, the majority would be willing to sell their maize to government in years of maize shortage in the country, on the condition that the terms of the transaction are clear and agreed upon consultatively in advance. Particularly, the circumstances under which large-scale farmers would be required to sell to government, the pricing of the maize sold, and the timing of payment by government were raised as key factors that needed to be clarified and be legally binding.

In order to provide expanded incentives for increased commercial maize production by large-scale farmers, Malawi should take the following two actions:

1. **First, Malawi should promote and strengthen an open consultative platform between government and large-scale producers to determine options for increasing maize production for the market and to explore how constraints can be addressed in partnership.** This approach has been adopted elsewhere, such as in Zambia and South Africa, and can be implemented at relatively low cost to government. The platform could also serve as an information hub, similar to the South African Grain Information System (SAGIS), which brings together data on stocks and consumption of grains in the country collated from major players in the grain sector of South Africa. In addition, the platform could serve as a venue for monitoring and evaluating maize production in the country in a way that promotes predictability and trust of the market. This recommendation is based on the fact that the chief constraint highlighted by most large-scale commercial farmers was market uncertainty caused by government interventions in the maize markets.
2. **Using this platform, government and private sector should agree on conditions that would allow commercial producers to export maize on a pilot basis. As part of this pilot, the large-scale producers should be prepared to sell directly to government in years of anticipated maize shortages.** For this pilot to work, it will be critical that the terms and conditions are clear, agreed upon in a consultative manner, and legally binding. Importantly, both government and large-scale commercial producers would need to follow through on its commitments to build trust and good faith in the markets.

Malawi's current mix of maize marketing policies appear to cause large-scale, commercially oriented agricultural producers to view maize through the lens of self-subsistence: to produce just enough for the consumption of their farm workers but little more. With open dialogue and information sharing through a consultative maize marketing platform and a well-defined pilot through which large-scale producers are allowed to export, government and the private sector can work together to make maize grain production commercially viable for Malawi's farmers while at the same time increasing maize availability at the national level. These actions will contribute to making Malawi less vulnerable to price and weather-related shocks and will result in a more prosperous and dynamic agriculture sector that contributes to foreign exchange earnings and economic growth for the nation, while better assuring that the staple food needs of its population will be met.

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INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
2033 K Street, NW • Washington, DC 20006-1002 USA
Tel: +1-202-862-5600 • Skype: IFPRIhomeoffice
Fax: +1-202-467-4439 • E-mail: ifpri@cgiar.org

MINISTRY OF AGRICULTURE, IRRIGATION AND WATER DEVELOPMENT
Capital Hill, • Lilongwe , Malawi
P. O. Box 30134 • Lilongwe 3, Malawi
Tel: +265-1-789033 • Fax: +265-1-788003
Contact: Alex Namaona, Director of Agricultural Planning Services (namaonaalex@gmail.com)

IFPRI- LILONGWE
P.O. Box 31666 • Lilongwe 3, Malawi
Tel: +256-1-771780 • E-mail: ifpri-lilongwe@cgiar.org
Contact: Bob Baulch, Country Program Leader (b.baulch@cgiar.org)