

Assessing Alternatives to Tobacco Farming for Smallholders in Malawi

Mrunal Shah, Jacob Ricker-Gilbert & Makaiko G. Khonje

Key Messages

- Malawi is arguably the world's most tobacco dependent economy, yet its future as a major tobacco producer is uncertain due to the perception of declining tobacco prices over time, along with health risks, child labor laws, and anti-smoking campaigns.
- Using nationally representative data, along with time series data on tobacco prices, we assessed the profitability of Malawian tobacco and its potential alternative crops.
- We found that the percentage of smallholder farmers growing tobacco declined over the past 10 years from 16% in 2009-2010 to 5% in 2018-2019.
- Smallholder farmers who left tobacco cultivation allocated their tobacco land to maize and to smaller extent grain legume crops.
- Tobacco is more profitable than alternative crops for smallholder farmers who remained in tobacco production.
- Improving value chains for other high value crops is more cost-effective than focusing on moving the remaining 5% of smallholder farmers out of tobacco cultivation.

Introduction

Malawi is arguably the world's most tobacco dependent economy. Sales of the crop account for 50% of the nation's total export value, and Malawi is the top producer of burley tobacco alongside Brazil and the United States.¹ One of the unique features of Malawian tobacco is that smallholder farmers (with less than a hectare) are the main producers, cultivating the crop as their main source of income.² Nevertheless, there is widespread agreement among policymakers, donors, civil society and other stakeholders that Malawi's days are numbered as a major tobacco producer.³ This view is due in part to a perception of declining tobacco prices over time, along with concerns about health risks for tobacco consumers and tobacco producers, child labor laws, and anti-smoking campaigns.^{4,5}

To understand trends in tobacco supply, tobacco prices, and profitability of alternative crops, we

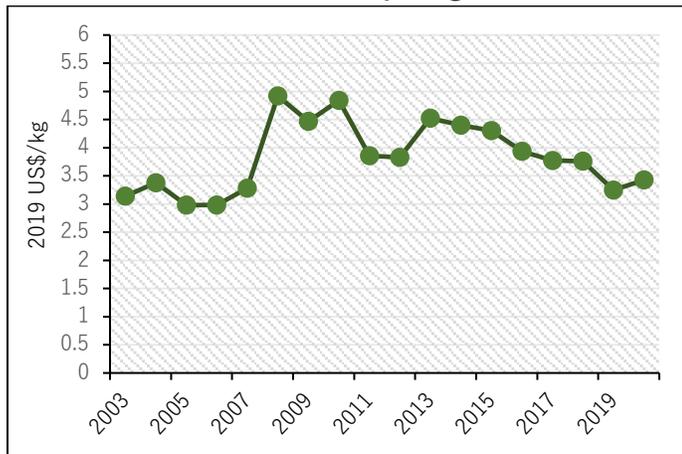
used nationally representative data on smallholder farmers in Malawi, collected between 2009 and 2019, along with time series data on tobacco prices. We identified groundnuts, soybeans, pigeon pea and maize as widely grown crops by Malawian smallholders that have the potential to be alternative cash crops.

Key findings

Our investigation on Malawian tobacco and its potential alternative crops revealed four main points. First, we found that tobacco prices have declined significantly over the past 10 years (Figure 1); however, this decline is consistent with overall trends in global commodity prices. While we anticipate prices to retreat back to their ten-year average, in Malawi, real tobacco prices in 2019 were still above their prices from the early 2000's.

Second, our analysis of smallholder survey data between 2010 and 2019 showed that the

Figure 1: Real price for tobacco exported from Malawi to World market in 2019 US\$ per kg



Data source: Tobacco Commission. Note: Real prices generated by deflating with US CPI values from World Bank data for CPTOTSAXN indicator.

percentage of smallholder farmers growing tobacco declined over the past 10 years from 16% in 2009/10 to 5% in 2018/19. This suggests that movement out of tobacco cultivation by smallholders in Malawi is well underway. However, as shown in table 1, those who remained in tobacco cultivation appear to have been the most efficient producers of the crop. For example, the average area under tobacco for those who grew it increased from 0.40 hectares in 2009/10 to 0.53 hectares in 2018/19, a 33% increase.

Concurrently, the average tobacco yields (kilograms/hectare) for those who grew tobacco consistently increased from 984 in 2009/10 to 1,372 in 2018/19, nearly a 40% increase in yield. This explains why overall tobacco output only fell by 10,000 tons from 130,000 tons in 2009/10 to 120,000 tons in 2018/19, among the smallholder sample, equivalent to an 8% decline.

Third, we investigated what the 11% of households nationally who dropped tobacco cultivation between 2010 and 2019 engaged in for livelihood activities. We found that these smallholders allocated their land to maize and, to a lesser extent, groundnuts and soybean. Furthermore, 16% of them stopped growing crops all together.

Table 1: Tobacco participation and production by smallholders over time

	2009/10	2015/16	2018/19
Number of households growing tobacco	1,335	561	440
Estimated number of smallholders growing tobacco (weighted)	368,038	183,774	174,370
Total number of households (weighted)	2,515,879	2,900,000	3,236,919
Percent of households growing tobacco	15%	6%	5%
Estimated total area under tobacco ('000 ha)	147	82	92
Estimated total tobacco output (000 tons)	130	100	120
Average area under tobacco if cultivating (ha)	0.40	0.45	0.53
Yields (kg/ha) (mean)	984	1,281	1,372

Source: World Bank Integrated Household Survey.

Additionally, 31% of them had someone in the household who ran an enterprise, while 46% had someone who worked as a salaried employee in 2019. However, 62% of the households who left tobacco had a household member employed as an agricultural laborer (*ganyu*) in 2019.

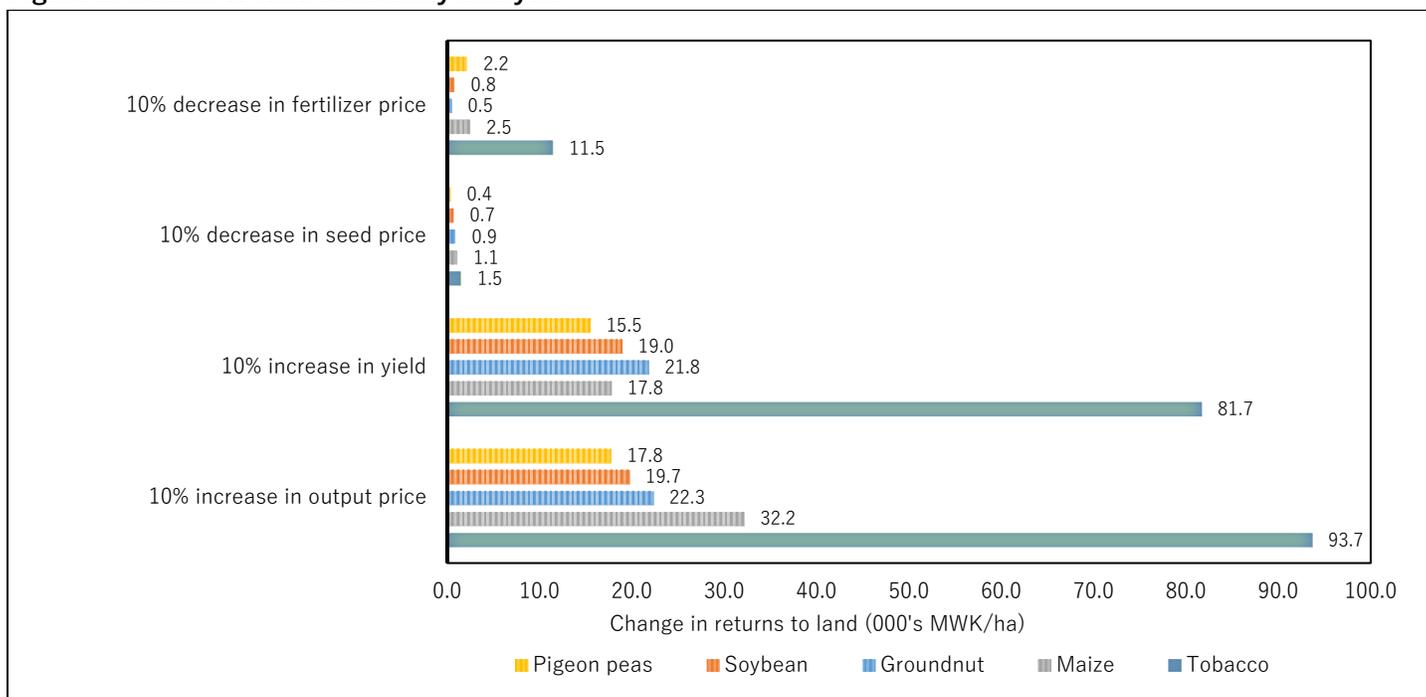
Fourth, in order to identify the potential policy levers to raise the competitiveness of alternative crops to tobacco, we performed sensitivity analysis on returns to land for different crops. Specifically, we calculated the change in returns to land corresponding to a 10% change in four determinants of returns to land (fertilizer price, seed price, yield, and output price), and the results are shown in Figure 2.

We found that returns to land of all crops are more responsive to revenue increasing determinants (yield and output price) than to cost reducing determinants (fertilizer price and seed price) (Figure 2). Furthermore, tobacco is considerably more responsive to changes in all policy levers than to alternative crops.

Conclusions

We used nationally representative data on smallholder farmers in Malawi collected between

Figure 2: Return to land sensitivity analysis



Source: 2018/19 World Bank Integrated Household Survey. All values in 2019 MWK.

2009 and 2019, along with time series data on tobacco prices, to estimate trends in tobacco supply, tobacco prices, and profitability of other potential alternative crops for smallholders in Malawi.

Our results suggest that the tobacco sub-sector in Malawi may have undergone a structural transformation over the past decade. In 2009/10, 16% of smallholders grew tobacco, but in 2018/19, only 5% did. It appears that inefficient tobacco producers stopped growing the crop as its price declined, while the most efficient producers remained. Those who remained in tobacco cultivation expanded their area and increased their yields over time. For these households, tobacco remained relatively more profitable than alternative crops such as maize, groundnuts, soybean, and pigeon pea. Our policy scenarios clearly indicated that it will be very expensive to induce the remaining 5% of households to move away from tobacco through a combination of taxes on tobacco and subsidies for other crops.

Those who left tobacco over the past decade allocated most of their land to maize and, to a lesser extent, soybean and groundnuts. There may have been some encouraging factors driving the switch as a significant percentage of households who dropped tobacco engaged in enterprises and salaried employment. However, more than 60% of those who left tobacco had a household member engaged in *ganyu* labor, suggesting some negative factors may have also driven the switch.

In total, our analysis indicates that no single commodity or livelihood activity will be able to replace tobacco's importance to the Malawian economy by itself in the short or medium-term. Therefore, we suggest that it would be more cost-effective for policy priorities in Malawi to focus on improving value chains for other high value crops rather than directly focusing on moving the remaining 5% of smallholder farmers out of tobacco cultivation.

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