

## CONCLUSION

The role of tobacco in Malawi's economy will continue to diminish. Smallholder tobacco farmers, who are already switching to other crops, including sunflower and soybean, need to be supported to address their production and marketing challenges. There is an urgent need to develop the supply chains of crops that have high potential to provide alternative livelihoods for tobacco farmers, such as soybean. These crops have the genuine potential to support the livelihoods of thousands of farmers who presently depend on tobacco as their livelihood.<sup>25</sup>

In particular, alternative livelihoods that ensure that all dimensions of sustainability - economic, ecological and social - are enhanced should be strongly supported. Therefore, the development of sunflower will be challenging. Other oilseeds, notably soybeans, have the potential to be a sustainable alternative, given they are grown for the local market.

The search for alternatives to tobacco in Malawi has, so far, shown that simply substituting tobacco for another commodity will fail. Instead, the focus should be to develop a range of agricultural value chains to ensure that farmers have diversified livelihood sources. Soybean and groundnuts, and to some extent, sunflower are already promising crops that are offering sustainable income sources for smallholder farmers, even in leading tobacco-producing districts of Malawi.

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Unfairtobacco exposes how tobacco industry harms farmers, consumers and the environment.

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# LEGUMES AND SUNFLOWER IN MALAWI

THIS SERIES OF CASE STUDIES TAKES A CLOSER LOOK AT ALTERNATIVES TO TOBACCO GROWING WITH AN EMPHASIS ON SUSTAINABILITY. THE AUTHOR DESCRIBES THE ECONOMIC, ECOLOGICAL, AND SOCIAL ASPECTS OF REPLACING TOBACCO WITH LEGUMES AND SUNFLOWER IN MALAWI.

The economy of Malawi is heavily agro-based with the agricultural sector accounting for over 82.5% of its foreign exchange earnings and supporting over 90% of the population.<sup>1</sup> In the agricultural sector, 84.5% of the total labour force is employed, with the majority, i.e. 95% of the total agricultural labour force, working as smallholder farmers.

Malawi is the world's most tobacco-dependent economy, as the commodity accounted for approx. 50% of the total export value in 2012.<sup>2</sup> The country is among the world's top ten producers of tobacco leaf and the top producer of burley tobacco, alongside Brazil and the USA,<sup>3</sup> and the demand for Malawi's burley remains high. Against this background the debate about the effects of the WHO Framework Convention on Tobacco Control (FCTC) continues to take centre stage in the development arena of Malawi. The country has not signed the FCTC and tobacco growing continues to shape the politics of tobacco control in the country.<sup>4</sup> Policy makers often weigh the health benefits of tobacco control against the potential economic losses that may be brought about by tobacco control in a country that is solely dependent on tobacco.

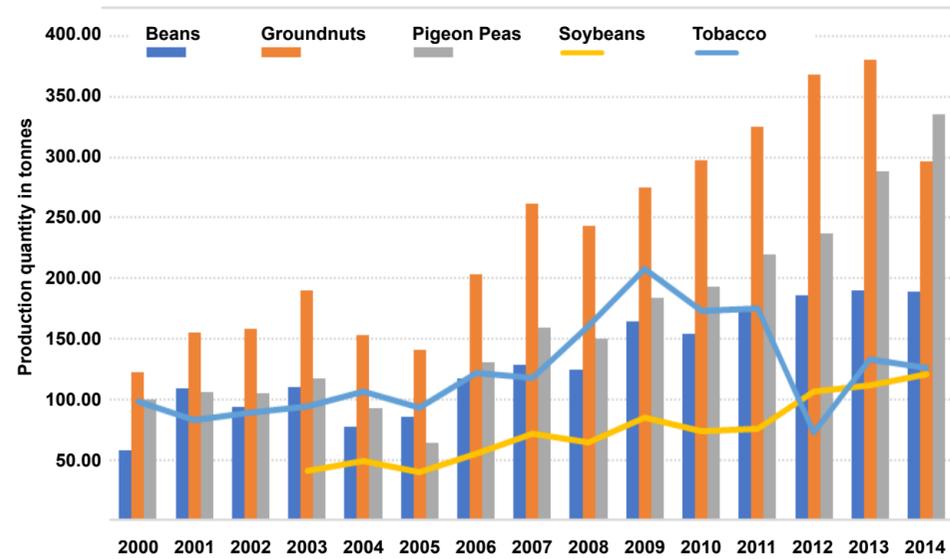
Since 2009, tobacco production is declining: the area under tobacco production decreased from 183,000 hectares to 123,000 hectares (2014) while the volumes of unmanufactured tobacco produced fell from 208,000 tonnes to 126,000 tonnes (2014).<sup>5</sup> This decline is attributed to low prices that farmers receive at the tobacco auction floors in Malawi<sup>6</sup> from tobacco companies thus compensating the effects of the FCTC elsewhere.

## LEGUMES AND SUNFLOWERS IN MALAWI

Responding to the dwindling market for tobacco, legumes are increasingly becoming an important component of the agriculture sector in Malawi.<sup>7</sup> The Agriculture Sector Wide Approach (ASWAp) of 2009 highlights the promotion of legumes as one of the strategies for crop diversification fostering food security and reducing malnutrition in Malawi.<sup>8</sup> Key legumes include bean (*Phaseolus vulgaris*), groundnut (*Arachis hypogaea*), pigeon pea (*Cajanus cajan*) and soybean (*Glycine max*).

Between 2000 and 2014, the production of all key legumes has steadily been increasing. Obviously, the government of Malawi's support to the legumes sector is bearing fruit, particularly through the government-run Farm Input Subsidy Programme (FISP) which is also providing legumes seed (either groundnut, soybean, cowpeas, or pigeon pea) to smallholder farmers since 2010.

Sunflower (*Helianthus annuus*) is also a potential viable alternative for tobacco farmers. Since 2013, the National Export Strategy (2013-2018) prioritises sunflower and other oilseed commodities as future export crops for Malawi. Sunflower production in Malawi is concentrated in some districts where tobacco is also widely grown, such as Kasungu, Mchinji and Rumphi. The annual demand for sunflower in Malawi, which is between 30,000 to 40,000 tonnes, far exceeds domestic production which remains around 15,000 tonnes.<sup>9</sup> This implies that there is a huge untapped market for sunflower domestically.



Legumes and Tobacco in Malawi 2000-2014 (Source: FAOSTAT)

A number of initiatives in Malawi are implemented to promote sunflower and other oilseed commodities. For example, the German development agency GIZ is promoting sunflower, groundnuts and soybean as alternatives to tobacco cultivation in its Green Innovation Centres for the Agriculture and Food Sector (GIAE) programme.<sup>10</sup> The GIAE programme in Malawi started in November 2014, will run until September 2021 and aims at increasing the income, production, and productivity of smallholder farmers, especially women and youth, and at improving food supply. The programme supports four value chains: soybean, groundnuts, sunflower and cassava. GIZ is working with the Mwimba College of Agriculture which until recently has served almost exclusively for vocational training in tobacco cultivation and is a training arm of the Agricultural Research and Extension Trust (ARET) with close relations to the tobacco industry.<sup>11</sup> GIZ aims to support Mwimba College to reorient its curriculum more towards oilseed promotion in Malawi. The programme includes capacity development to Mwimba College to upgrade the skills of teachers in the oilseed sector and to improve the quality of education. Thus, the vocational training is more oriented towards practical skills acquisition in the oilseed sector and promotes placements and internships in the oilseed companies of Malawi.

Promoting soybean, groundnut and sunflower through the GIAE, Mwimba College has reached out to over 300 farmers who belong to the nearby Kakhoma Farmers' Cooperative and have been depending on tobacco as the main source of income.

From 2008 to 2015 the cultivation area for sunflowers in Malawi has increased from 9,700 hectares to 19,500 hectares as the volume of sunflower seed has grown from 8,000 tonnes to 14,300 tonnes. Despite several efforts sunflower yields remained relatively low with 958 kilo per hectare (2012/13) at best, but lately decreased to 733 kilo per hectare (2014/15). Thus, the potential for sunflower upscaling is limited in Malawi, contrary to soybean and groundnuts. Consequently, GIZ has decided to drop the sunflower value chain from the GIAE programme in 2018.<sup>12</sup>

## ECONOMIC ASPECTS

Studies have demonstrated that some alternative crops are economically viable and highly profitable for smallholder farmers.<sup>13</sup> The results show that e.g. soybean is more profitable than tobacco grown by independent farmers. While the profitability of tobacco under contract with leaf companies is higher, soybean remains very competitive and offers excellent opportunities as an alternative. Soybean is already widely grown in the major tobacco growing districts Lilongwe, Kasungu, Mchinji, Ntchisi, Dowa, and Rumphu.

	Soybean	Tobacco (independent farmers)	Tobacco (under contract with leaf companies)
Production year	2011/12	2013/14	2013/14
No of farmers interviewed	185	378	307
Labour cost (USD/ha)	237,22	1122,6	1002,77
Output price (USD/kg)	0,74	1,78	2,43
Profit (USD/ha)	303,94	-92,17	554,26

Profitability of Soybean and Tobacco in Malawi (Source: Makoka et al. 2016b)

In livestock-farming communities, grain legumes are used as livestock feed. Groundnut, for instance, increases livestock productivity as the groundnut haulm and seed cake are rich in digestible crude protein content.<sup>14</sup> Soybean is also used for livestock feed, particularly in the poultry industry in Malawi.<sup>15</sup> Future demand for soybean in Malawi will be driven by the animal feed industry and is prognosed to reach around 71,000 tonnes of soybean annually used for animal feed by 2020.<sup>16</sup>

Further, grain legumes are among Malawi's exports and provide foreign exchange to the economy. As the reliance on tobacco continues to go down, the role of legumes in the generation of foreign exchange will grow. In 2013, for example, Malawi exported groundnuts worth USD 58.8 million and soybean with a value of USD 8.4 million.<sup>17</sup>

Sunflowers are also an important source of income, contributing between 5 to 10% to annual household income.<sup>18</sup> The promotion of sunflower is increasing low income households' access to cooking oil and margarine. With financial support from UNDP's Malawi Innovation Challenge Fund, the local manufacturing company Sunseed Oil started to produce long-life fridge free margarine made from sunflower that is supplied by smallholder farmers. The product, which entered the local market in March 2017, has promoted market access for over 10,000 rural smallholder sunflower farmers in Malawi.<sup>19</sup>

Additionally, sunflowers are an important crop, which could significantly contribute towards foreign exchange earnings, once the sector is well developed. In 2013, Malawi exported sunflower seed valued USD 639,000.

## ECOLOGICAL ASPECTS

Unlike tobacco, legumes fix atmospheric nitrogen in soils thereby enhancing soil fertility and reducing demand for inorganic fertilizers.<sup>20</sup> This is an important advantage in the context of agricultural production in Malawi that is dominated by resource-constrained smallholder farmers who are often not able to buy high priced chemical fertilizers. Legumes such as soybean are often intercropped with maize which in turn is supported by the nitrogen level after soybean.

Sunflower cultivation, on the other hand, involves the use of inorganic fertilizers and pesticides which often have a negative ecological impact. If grown as monocrop, sunflower has similar risks associated with soil quality, erosion and biodiversity as most other monocrops.

Tobacco production leads to significant deforestation as land is cleared for cultivation and trees are cut to build tobacco sheds for drying of the leaf. In contrast, the cultivation of soybean and sunflower does not cause deforestation.



Soybean field in Malawi

## SOCIAL ASPECTS

Grain legumes such as pigeon pea and soybean provide a vital supplement to the staple crop maize in Malawi,<sup>21</sup> are grown by the majority of the land- and labour-constrained smallholder farmers and are central to their food security. Beans are the most widely grown legume that is consumed alongside maize and forms part of a common diet in institutions such as boarding schools, hospitals and prisons, where animal protein is not only scarce but also expensive.<sup>22</sup>

As a cheap source of vegetable protein and vitamins, soybean-based products are for example used to treat malnutrition among under-five children and to promote nutrition for people living with HIV and AIDS. Similarly, groundnut is an important component of both rural and urban diet through its provision of valuable protein, edible oil, minerals, and vitamins.<sup>23</sup>

Tobacco farmers are exposed to significant health risks, such as the green tobacco sickness and pesticide poisonings as well as respiratory problems.<sup>24</sup> In contrast, sunflower or legumes production do not pose significant health risks to the farmers, because these plants do not contain toxic substances. However, inorganic fertilizers and pesticides used in sunflower production are a health risk.