

BROADENING THE BASE

Malawi seeks to reduce its heavy reliance on tobacco.

By Taco Tuinstra

The impacts of Malawi's balance-of-trade crisis were visible in late March even to an infrequent Western visitor who could afford to stay at an upscale hotel. Certain items on the room service menu were consistently out of stock, for example, while getting around Lilongwe required queuing for gasoline and hoping the petrol station would not run dry before the driver reached the pump.

Because Malawi imports more goods and services than it exports, it suffers a chronic shortage of hard currency. In 2020, the latest year for which figures are available, the country's import bill was \$2.8 billion, versus exports of only \$800 million, according to the National Statistics Office. With not enough U.S. dollars to pay for imports, many foreign-made goods were simply unavailable.

For Malawi's well-heeled international guests, the shortages represent mere inconveniences. Upon return to their

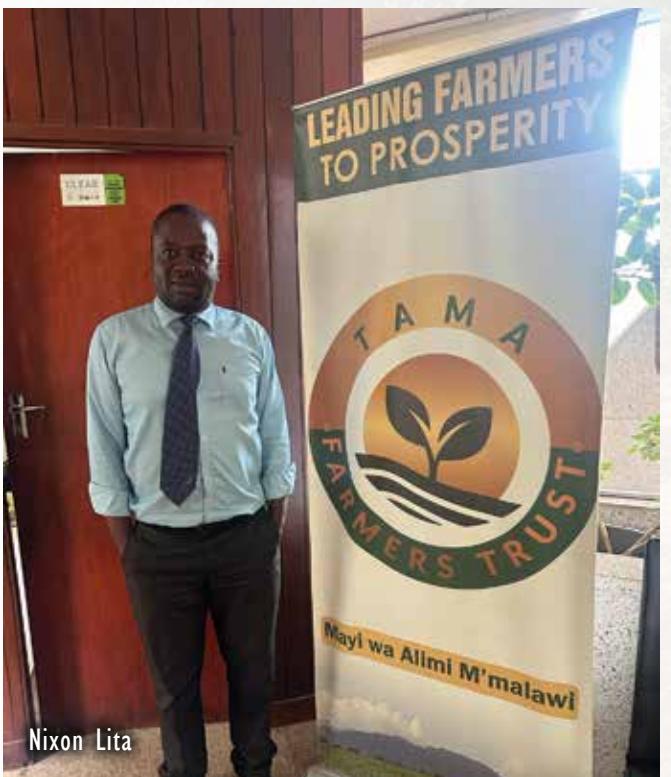
home countries, they will be able to generously make up for the missed food items and travel without worrying about fuel. For the average Malawian, however, the trade deficit represents a real problem. Among other things, the dearth of foreign currency prevented the nation from importing enough fertilizer for its Maize and other crops this year, spelling trouble for food security and social cohesion. While Malawi was peaceful during *Tobacco Reporter*'s visit, some feared it would not stay that way. "Social unrest is coming," warned an industry veteran.

One cause of Malawi's economic problems is the fact that it relies too heavily on a single commodity. Tobacco accounts for between 12 percent and 15 percent of Malawi's gross domestic product and between 40 percent and 70 percent of export earnings, depending on who you ask and on the season. Cultivation alone employs nearly half a million people, according to the Tobacco Commission, which regulates the trade. Those figures make Malawi the world's most tobacco-dependent country.

They also leave Malawi vulnerable to factors outside its control, including climate change and global cigarette sales. "Visit the countryside in April/May, and you will see how people's lives change when the tobacco markets open," says Nixon Lita, CEO of the TAMA Farmers Trust, describing the influx of cash at the start of each selling season. "If the markets fail, however, there will be poverty in the villages."

Last year is a case in point. Due to unfavorable climate conditions during the growing season, Malawi produced only 85.09 million kg of tobacco in 2022—the lowest volume in a decade, according to the Tobacco Commission. Despite higher per-kilo prices than in 2021, farmers earned just \$182.12 million from their leaf sales last year. The reduced inflow of foreign currency in 2022 has left Malawi struggling even harder than usual to import essential items. The money made from this season's larger crop (see "Back to Normal," page 21) is unlikely to make up for the shortfall.

Malawi's overreliance on tobacco will become an even greater problem as global cigarette consumption stagnates. Already, the country's leaf sales are down considerably from only a few years ago. Between 2016 and 2021, tobacco exports in real terms dropped by 42 percent, according to the World Bank. While local merchants are confident that Malawian



Nixon Lita



Malawi is uncomfortably dependent on a single commodity. To better balance its economy, the country is investing in supplemental value chains, such as groundnuts, bananas and mushrooms.

burley—the country's predominant tobacco variety—will continue to find buyers in the near future (see "Enduring Demand," page 23), they are acutely aware that the industry should start preparing for a future with less tobacco, especially as the World Health Organization Framework Convention on Tobacco Control measures to discourage cigarette consumption start to bite.

Spreading the Risk

To broaden Malawi's economic base, stakeholders have stepped up efforts to develop other sectors. The TAMA Farmers Trust, for example, expanded its mandate in 2019. Originally established to represent only tobacco farmers, the organization is now helping its members produce other crops as well. Tobacco merchants such as Limbe Leaf Tobacco Co. (LLTC) and Alliance One Tobacco Malawi (AOTM), too, are encouraging diversification. Leveraging their existing farmer-support structures, they are now also disseminating inputs and agronomic advice for nontobacco crops to their contracted growers.

Another big push comes from the Foundation for a Smoke-Free World (FSFW), which is an independent U.S. nonprofit organization that is funded by annual gifts from PMI Global Services. Established to "end smoking in this generation," the FSFW focuses its grantmaking and charitable activities in three categories: health and science research aimed at helping smokers quit or switch to less harmful products, industry transformation and agricultural diversification.

The foundation's agricultural diversification objectives include ensuring that smallholder farmers in Malawi impacted by the declining demand for tobacco are supported to find sustainable alternative livelihoods. To advance these objectives, the FSFW has made grants to set up two institutions—the Centre for Agricultural Transformation (CAT), a science, business and technology incubation hub, and the Mwapata Institute, an independent agricultural policy think tank that conducts research to inform and improve agricultural-related policies.

Candida Nakhumwa, FSFW vice president and country director in Malawi, stresses the importance of developing multiple value chains simultaneously. "We should not make the same mistake as with tobacco by developing just one," she says. In selecting alternative commodities, Nakhumwa urges Malawi to prioritize both exports and import substitution. "We are spending precious foreign exchange on importing things that we should be producing domestically," she says. "For example, we can make cooking oil from soya beans or sunflower and use that as an import substitute." Soya beans and sunflower, along

with traditional Malawi crops such as groundnuts, also enjoy growing demand internationally, representing export potential.

Building Markets

For crops like soya bean, sunflower and groundnuts to succeed, however, Malawi will need to replicate some of the factors that have allowed tobacco to thrive, notably infrastructure and

Photo: FSFW



Candida Nakhumwa

a deliberate focus on productivity. Over the years, the Malawi government gave lots of support to tobacco at the expense of other crops that also had potential, according to Nakhumwa. As a result, the markets for those other value chains remain underdeveloped.

"The fact that tobacco has a structured market in Malawi, with auction floors and contracting companies, means that leaf growers have access to buyers worldwide—something that is not necessarily the case for producers of other crops," says Nakhumwa. Without a structured market, producers of nontobacco crops will simply be trading in Malawi kwacha instead of earning hard currency on the global market.

A structured market also gives confidence to financiers. "Tobacco farmers are not paid in cash; they receive their payments through the bank—so the lenders know they will recover whatever they loaned to the farmer," says Nakhumwa. Access to finance in turn means access to agricultural inputs, including inorganic fertilizers, which are imported.

In addition, tobacco has benefited from research and agronomic advice, both through the leaf merchants and the government's Agricultural Research and Extension Service Trust. Such services have historically been provided at much lower levels to other crops, although this is starting to change as stakeholders adjust to evolving market conditions.

Due to suboptimal agricultural practices, nontobacco farmers in Malawi are producing at only 30 percent to 40 percent of their potential, according to Nakhumwa. The country's soils suffer from high acidity and low nutrient levels. These can be fixed using both organic and inorganic fertilizers. However, with commercial banks charging interest rates of 20 percent to 30 percent, tools to improve the soil, such as agricultural lime and inorganic fertilizer, remain out of reach for many smallholder farmers.

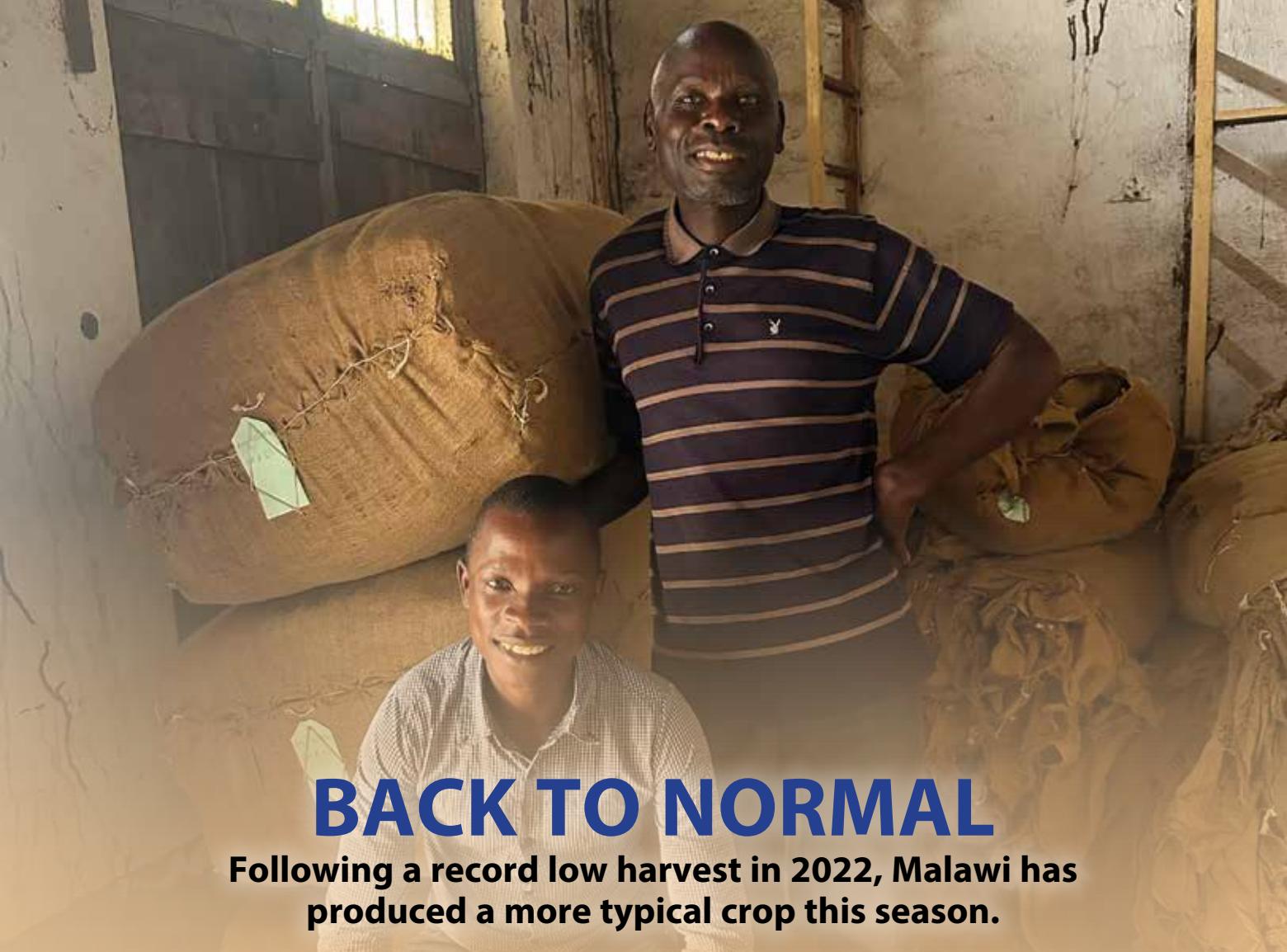
Low productivity means that even though there is demand for Malawi's nontobacco crops, the country is in many cases unable to satisfy it sustainably. "When a customer in South Africa signs a forward contract, he will want assurance that the goods are going to be delivered consistently," says Nakhumwa. "If we can supply for only two months and then run dry, we are no longer an attractive supplier for them. The customers may in that case prefer to deal with a seller in Brazil or elsewhere who can guarantee supply." This is why the FSFW is focusing on enhancing productivity at the farmer level and creating new markets through the CAT.

Skills, Productivity and New Markets

The CAT aims to boost agricultural productivity through science, technology and innovation while helping innovators turn their ideas into sustainable agribusinesses to create new markets for the alternative commodities produced by smallholders. At a demonstration farm on the outskirts of Lilongwe, the organization offers a platform for a wide range of private sector partners to showcase technologies to help farmers optimize their operations.

Alongside technologies such as irrigation and ground sensors, the farm features different varieties of maize, groundnut, soya beans, rice and sunflower, among other crops. It also works with agronomists to transfer knowledge: What happens

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BACK TO NORMAL

Following a record low harvest in 2022, Malawi has produced a more typical crop this season.

After last year's short crop, the Malawi tobacco trade is looking forward to more normal volumes this season. Typically, Malawi's rainy season starts in November/December, but in 2022, the rains came much later, delaying the growing season by two months to three months.

The drought coincided with transplanting in Malawi, causing a good percentage of the tobacco to dry out. Farmers contracted with one prominent leaf merchant alone suffered 35 percent plant mortality. As a result of the adverse weather conditions, Malawi produced 85 million kg of leaf last year—the lowest volume in a decade, according to the Tobacco Commission.

This season, by contrast, is looking more promising. The trade is anticipating some 128 million kg of leaf, closer to the normal figure of 130 million kg. Burley accounts for most of the volume (81 percent), followed by flue-cured Virginia (16 percent) and dark air-cured tobacco (3 percent). Initial surveys indicate a good quality leaf as well.

Industry representatives cite favorable weather during the growing season, with rain falling in the right places at the right times and in the right volumes—until Tropical Cyclone Freddy struck southern Africa. The system—the longest-lasting on record—pulled warm air from the Intertropical Convergence Zone and the Congo over the southern and central parts of Malawi for much of February and March,

resulting in perpetual overcast and rainy conditions in those regions. When it hit Malawi on March 11, it brought torrential rains and gale force winds, dumping up to 300 mm of rain in a 24-hour period. Cyclone Freddy caused massive landslides and flooding, killing more than 1,000 Malawians. Tobacco companies have been contributing to relief efforts through the Tobacco Processors Association.

But while the storm devastated lives and infrastructure, it largely spared Malawi's tobacco crop, and the market opened as scheduled on April 12. That is because most Malawi tobacco is grown in the country's central and northern regions whereas the storm hit hardest in the south. According to Nixon Lita, chief executive of the TAMA Farmers Trust, the little tobacco that is grown in southern Malawi matures earlier than the leaf produced in the central and northern regions. "By the time the cyclone hit, many farmers had already reaped their tobacco," he says.

Despite the increased volumes, Malawi will still fail to meet demand (see "Enduring Demand," page 24), which is estimated at 150 million kg this year. According to Lita, it's hard to double production in 12 months, especially with the significantly higher cost of production (see "Coping with the COP," page 26) this year. If burley shortage results in good prices, as predicted, it should encourage more farmers to plant tobacco next year. —T.T.

if you plant 10 cm apart or practice double-row planting? What happens if you tweak the amount of fertilizer? According to CAT Executive Director Macleod Nkhoma, such demonstration plots are an effective way to disseminate information to smallholder farmers and promote the adoption of technology, especially in a country with low literacy rates like Malawi.

In addition to its work on the farm, the CAT helps agricultural entrepreneurs with skills that enable them to access finance and grow their agribusinesses while providing markets to smallholder farmers. "Banks tend to be wary of unstructured markets," says Macleod. "They view those value chains as very risky." By supporting the development of these agribusinesses, the CAT helps them to become bankable.

Already, the center has supported several agricultural ventures, including a project by Hortinet that seeks to reinvigorate Malawi's dormant banana business through tissue culture (see "From Imports to Orchards," page 28) and an initiative by JAT Investments, which aims to replace the button mushrooms that are currently imported into Malawi with domestically cultivated varieties (see "Fungi Fever," page 27).

The CAT is helping Hortinet to expand its farmer base from 200 to 700 contracted growers. "Without CAT's support, we would not have had the capacity to supply that many growers with our banana plantlets," says Hortinet Executive Director Frank Washoni. JAT Investments benefited from CAT assistance in procuring seeds (spawn) and infrastructure in support of mushroom production. "The CAT helped us procure seed, infrastructure and training, allowing us to grow our growers' network from two to seven farmers club," says JAT Investments Operations Director Temwani Gunda. "It we had to work on our own, it would have taken much longer."

The Tone at the Top

To live up to their potential, the nontobacco crops will also need better policy frameworks. According to MwAPATA Executive Director William Chadza, export bans and foreign exchange quota currently disincentivize production. "Farmers are often unable to access hard currency to import agricultural inputs in time for the growing season," he says. In addition, some government market interventions, frequent policy reversals and the unpredictable business environment limit private investments in the agricultural sector. Contradictory policies relating to land and crops present a hurdle as well, according to Chadza.

Encouragingly, Malawi's leadership increasingly appreciates the need to broaden Malawi's economic base. Whereas the government in the past may have been reluctant to acknowledge the changing situation on the global tobacco market, it now appears more cognizant of the new realities. At the opening of the 2022 tobacco marketing season, Malawi President Lazarus Chakwera openly called for a diversification strategy. "The tone at the top is important," says Nakhumwa. "If the leaders cannot acknowledge that there is a problem and we need to pivot, stakeholders will not rally behind you."

Perhaps surprisingly to some, diversification has also been embraced by the tobacco industry. LLTC is supporting growers with certified food crop seeds grown on company farms in the Kasungu district while researching and developing other food



Simon Peverelle

crops for exports. It has collaborated with Feed the Future USAID and will be rolling out low-tech irrigation systems to boost productivity. AOTM has made a big bet on groundnuts (see "Gambling on Goobers," page 30), helping its contracted farmers increase yields and quality with improved varieties, farming equipment and agronomic advice. In March 2022, the company opened a groundnut processing facility in Lilongwe with the capacity to process 50,000 tons per day.

The merchants' investments in productivity, meanwhile, have enabled tobacco farmers to double their yields, allowing them to produce the same volumes of leaf on fewer hectares and release land for food and other cash crops. Tobacco industry leaders see no contradiction between their support for nontobacco crops and their primary business, arguing that farmer livelihood sustainability is in their interest. "Diversification makes sense," says Simon Peverelle, managing director of AOTM. In terms of weight, he points out, the company's contracted farmers already produce four times more food than tobacco.

But even with government and industry behind diversification, it will take time for Malawi to overcome its heavy reliance on tobacco. Tobacco Commission CEO Joseph Malunga believes the golden leaf will remain a major crop in Malawi for years to come. "It took us more than 50 years to develop the tobacco industry to where it is now," he says. "There is no way other crops will all of a sudden replace tobacco."

Nonetheless, Malunga acknowledges that Malawi needs to spread its eggs over more than one basket. "It is dangerous for us as a country to rely on one thing because if something goes wrong, you are definitely in trouble," he says. Rather than looking for commodities to replace tobacco, however, Malunga urges Malawi to promote crops that work *alongside* it, just like the leaf merchants have been integrating food crops into their tobacco operations.

Malawi has a long way to go, but through the combination of government, industry and nonprofit initiatives currently underway, it should be able to gradually develop a more diverse economy with multiple crops and livestock generating income, so that a bad season in one sector won't automatically reverberate across the entire country. The stakes are high, witnessed by the economic difficulties in the wake of last year's short tobacco crop. Success will mean not only greater food security but also more hard currency to import the items that Malawi cannot produce at home. With luck, it may even boost tourism, as the country's struggling hospitality sector will be able to stock more of the items its foreign customers expect.

TR

ENDURING DEMAND

Malawi burley remains popular even as global smoking rates stagnate.

Even as cigarette sales stagnate in many markets, demand for Malawi burley remains robust. An important component in the toolbox of the tobacco blender, burley is a key ingredient not only in the popular American blend cigarettes but also in roll-your-own and make-your-own products along with pipe tobaccos.

Due to last year's short crop, leaf merchants are anticipating strong interest this season. In 2022, the country produced only 69.2 million kg of burley—against an estimated demand of 150 million kg. This year, the Tobacco Commission is expecting 106 million kg.

While burley is produced in several countries, including in southeastern Africa, industry representatives are confident that Malawi can hold its own against other suppliers. "Malawi is still a preferred origin of burley," says Joseph Malunga, chief executive of the Tobacco Commission. "Even regionally, our burley is better than that from other origins."

Malunga suspects that demand for Malawi burley will increase as the country tackles concerns raised by customers about agricultural labor methods. Traditional rural African practices, such as tenancy, in which a farmer provides workers with food and housing during the season but pays them only after the harvest, or requiring children to help out on the family farm, are frowned upon in Western countries where many tobacco buyers are headquartered.

Tobacco companies have been pressuring their suppliers to abandon these habits, and in 2019 the Malawi government banned tenancy. Leading buyers of Malawi leaf have systems in place that not only prohibit their contracted growers from deploying children or tenants but also include elaborate verification mechanisms. In 2020, such systems helped Limbe Leaf, Alliance One International and Premium Tobacco Malawi quickly convince U.S. Customs and Border Protection (CBP) that their supply chains were free of forced labor when the agency temporarily prevented Malawi tobacco from entering the United States based

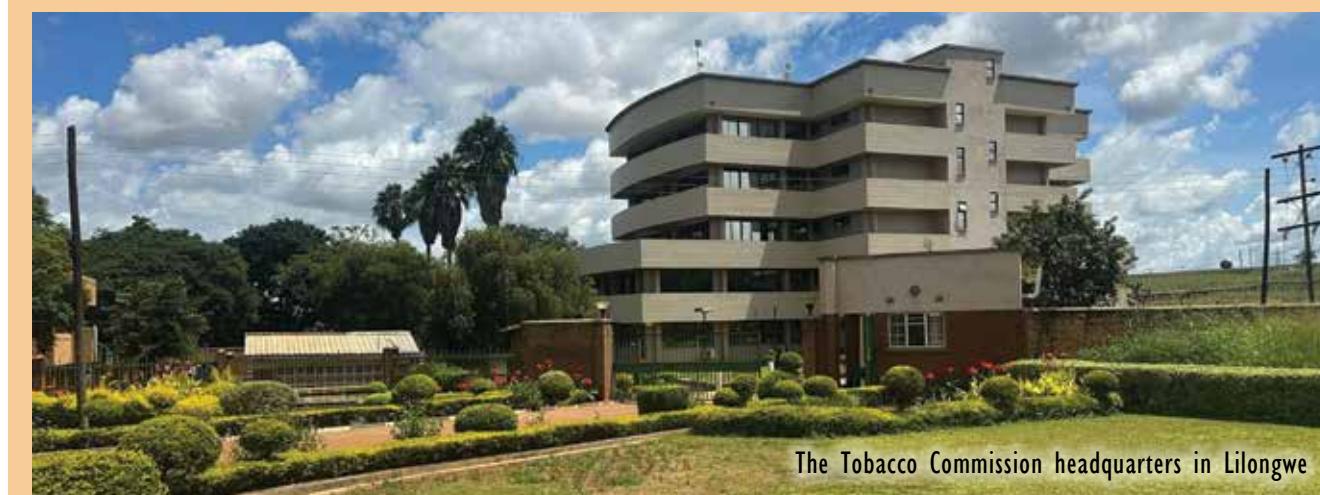
on concerns about forced labor. Impressed by the leaf merchants' responsible supply chain management, CBP swiftly lifted its ban on tobacco imported by those companies.

Recognizing the progress made, some customers who left due to compliance issues are now coming back, according to Malunga. "They see that we have been doing our homework."

But while the tobacco produced under contract with leaf merchants generally complies with the standards expected by Western governments and customers, the picture is less clear for the independently cultivated tobacco sold at auction, which accounts for approximately 10 percent of Malawi tobacco production.

The country's tobacco industry is dominated by smallholder farming. With nearly half a million individuals cultivating leaf in Malawi, many of them living in remote areas and many of them illiterate, it will take a while for the message to reach everybody. "We have made big strides—to the extent of having laws," says Malunga. "But you cannot expect these practices to stop overnight. The commission has done a lot to communicate what customers want, but some farmers will get the message very late. It will be a gradual transition."

Don McAlpin, managing director of Limbe Leaf Tobacco Co., which is affiliated with Universal Corp., hopes the change will come sooner than later. For Malawi to maintain its appeal on the global market, it will be essential for the noncontracted growers to meet ESG targets, he says. "Any perceived concerns about sustainability or ESG issues in Malawi create a reputational risk to the Malawi brand and could impact Malawi tobacco regardless of the percentage that is contracted and compliant." —T.T.



The Tobacco Commission headquarters in Lilongwe



Joseph Malunga

COPING WITH THE COP

Growers confront the rising cost of production.



Like their counterparts around the world, tobacco growers in Malawi have suffered from the rapidly rising cost of production. In addition to domestic headline inflation of 26 percent, farmers had to contend with a significant increase in the price of fertilizer, which more than tripled over the past three years to four years. According to Nixon Lita, CEO of the TAMA Farmers Trust, this was due more to Covid-19-related shipping disruptions than to the war in Ukraine. Traditionally oriented toward the West, Malawi imports most of its fertilizers from the Middle East rather than eastern Europe, he says—but the result is the same as for countries relying on Russian and Ukrainian fertilizers: substantially higher prices.

Because virtually all inputs for Malawi tobacco production are imported, there's little the industry can do about this part of the equation—so it focuses on the factors it can control. Contracted farmers enjoy an advantage over their noncontracted colleagues because they benefit from the tobacco buyers' scale and global reach. "Due to bulk buying, we can get fertilizer on time in Malawi and price it competitively for farmers," says Simon Peverelle, managing director of Alliance One Tobacco Malawi. "For auction growers, that is harder."

The other way to offset rising production costs is by boosting farmers' incomes. "We try to negotiate with our buyers, asking them to increase the farmers' margins based on cost of production," says Joseph Malunga, chief executive of the Tobacco Commission. "That doesn't always go well because the buyers, too, are in business and want profit—but we try."

Under pressure from their customers to control costs, the merchants prefer to focus on boosting output. The leading leaf dealers employ or contract significant agronomy departments to help their contracted growers maximize both the quality and the yield of their tobacco, which in turn improves the net return on their crops, according to Don McAlpin, managing director of Limbe Leaf Tobacco Co. Size matters in this regard. Peverelle says that scaling up is necessary for farmers because it is increasingly difficult to earn a living income from smaller plots.

The Tobacco Commission, meanwhile, is promoting natural solutions to improve farmers' margins. For example, it encourages flue-cured tobacco farmers to establish woodlots and use "live barns"—curing facilities built using living trees—so they don't have to buy wood for curing or construction. "This not only reduces costs but also promotes sustainable development," says Malunga.—T.T.

FUNGI FEVER

Mushrooms sprout new opportunities for Malawi.

As Malawi seeks to diversify its economy, button mushrooms are emerging as one of the promising alternatives. Not only are the fungi popular among Malawians, who like to eat them as pizza toppings and in other foods, the country's climate and growing conditions are also conducive to its production. To date, domestic production has been minimal, however. In the 1980s, a government research station cultivated limited numbers, but the organization failed to invest in farmer training. Over time, domestic production fell by the wayside. Today, Malawi imports 92 percent of its button mushrooms from South Africa.

Lilongwe-based JAT Investments seeks to change that by promoting domestic cultivation. According to founder and Managing Director Temwani Gunda, mushrooms offer many advantages to the farmer. For starters, they require less land than other crops. "You can grow them in a small shed," she says, adding that this also protects them to a degree from the impacts of climate change.

The labor, meanwhile, is easy compared with tobacco. "You don't need to go into the fields and be exposed to the elements," says Gunda. "This means it is an inclusive commodity; even old people manage them." Selling for approximately MKW10,000 (\$9.75) per kilogram, mushrooms also offer attractive yields. A shed of 3.5 meters by 5 meters can produce 250 kg of mushrooms. One growing cycle takes about two months, allowing farmers in Malawi to grow three times per year. "And that's the production from just one shed," says Gunda.

Farmers venturing into mushrooms should also have no trouble selling them. A consultant hired by JAT Investments estimated domestic demand at between 70 tons and 75 tons.

The greatest challenge for Malawi mushroom producers is seed (spawn). Because there is no domestic production, it must be imported from South Africa or elsewhere. This adds not only cost and time but also risk—if the shipper does not properly control the temperature, the seed won't germinate.

With the help of the Centre for Agricultural Transformation (CAT), JAT Investments expanded its farmer base from two to seven farmer "clubs," each of which contains between 10 and 15 mushroom growers. The CAT also assisted with seed procurement, infrastructure and farmer training, allowing the number of farmers to grow at a much faster pace than it could have managed otherwise.

According to Gunda, growers, including many tobacco farmers, have been lining up to join the project—and they appear to have been pleased with the performance of the fungi. "Just one crop of mushroom allowed me to pay school fees and buy fertilizer for my maize," says one JAT grower. A colleague lauds the fact that, unlike tobacco, mushrooms are good for health and don't require him to chop down trees. —T.T.



Temwani Gunda

FROM IMPORTS TO ORCHARDS

Rebuilding the banana value chain

Until the late 1990s, bananas were big business in Malawi. The industry employed between 2 million and 3 million people and completely satisfied domestic demand. But then a nasty plant virus hit. Banana bunchy top virus (BBTV) wiped out production, forcing many former Malawi banana farmers to find alternative livelihoods. Today, the country relies almost entirely on imports. More than 90 percent of bananas consumed in Malawi are now purchased in Tanzania and Mozambique, which demand to be paid in precious foreign currency.

Supported by the Centre for Agricultural Transformation (CAT), Lilongwe-based Hortinet is working to reestablish banana production in Malawi. Through its efforts, it aims to create employment, reduce imports and offer Malawi an additional source of income while diversifying the country's economy and reducing its heavy reliance on tobacco exports.

Bananas are a popular food in Malawi, so there is opportunity for import substitution, according to Frank Washoni, executive director of Hortinet. "Currently, we are exporting jobs," he says. "This is something our smallholders could be doing if they get the appropriate support."

The strategy to deal with BBTV requires banana growers to uproot and burn their infected bananas and replace them with disease-free imported planting materials. The biggest challenge has been accessing clean planting materials. Until recently, there were no proper banana seed systems in Malawi. Because the existing crop strand had outlived its economic lifespan, there were no proper systems to supply banana growers with clean planting materials to reestablish their orchards.

To address this problem, Hortinet in 2019 established Malawi's first commercial banana tissue culture lab, allowing it to produce large quantities of planting materials in a short time. Hortinet gives plantlets to smallholder growers, negotiates production contracts and provides extension services. "At the end of the season, we buy the product—banana fruit—for either distribution or value addition," says Washoni. Among other things, bananas can be used to make flour and chips.

However, while Hortinet has the experience and technology,

it lacked the means to scale up its out-grower project and supply the desired 700 farmers. So the CAT, as part of a five-year project, helps Hortinet train potential banana growers at its smart farm. The idea is that, after five years, Hortinet will have sufficiently grown to self-finance its continued expansion to more smallholder farmers.

Washoni believes the potential domestic market is considerable. "According to the ministry of agriculture, we lost more than 25,000 hectares representing at least 10 metric tons of bananas each," he says. "Today, we are importing 20,000 tons per year, supporting only the urban areas—so there is still a big deficit."

Hortinet is determined to make a dent in that deficit. By the end of next year, it wants to distribute at least 1 million plantlets and establish a minimum of 500 ha of banana production with its contracted smallholders. With a plan to add 500 ha each year, Hortinet will have supported the establishment of 2,000 ha by the end of four years.

Washoni views bananas as a good opportunity for farmers looking to diversify. At the CAT smart farm, Hortinet demonstrates how profitable the fruit can be compared to other crops. While the initial payback period is longer than for tobacco, bananas offer multiple returns each season. "Once in the ground, you might harvest on a quarterly basis," says Washoni. At 15 tons per acre, the potential yield per unit of area is also high. And other than water, bananas require few inputs. Farmers can get away with organic manure and limited amounts of inorganic fertilizer. What's more, bananas require relatively little land. "Even on a plot of only 20 [meters] by 20 meters, it might make economic sense for the farmer to put in an orchard," says Washoni.

The next step will be to establish a structured market. Unlike tobacco, which has multiple players, a dedicated regulator and a well-developed system for selling and buying, there is no comparable infrastructure for bananas in Malawi. According to Washoni, it's a work in progress. "Once we hit a critical mass, we will need an organized market," he says. Right now, our priority is to get production going." —T.T.



A GAMBLE ON GOOBERS

Pyxus has great expectations of its Malawi groundnut business.

Like many of their customers, tobacco merchants in Malawi have been exploring supplemental lines of business—not only to ensure their future as cigarette consumption stagnates but also to help their contracted farmers develop supplemental sources of income.

Pyxus Agriculture Malawi's (PAM) contracted tobacco farmers often cultivate nontobacco crops, including groundnuts, maize and sunflowers. Measured by weight, its growers already produce four times more food than tobacco. As part of its efforts to improve farmer livelihoods and the communities in which they live, Pyxus has been working to find markets for some of these crops.

The company has high expectations, especially for groundnuts, which are nutritious sources of protein, vitamins and dietary fiber. Among other health benefits, groundnuts are credited with preventing heart diseases, lowering bad cholesterol and improving fertility. Common products made from groundnuts include cooking oil, herbal supplements, butter and snack items. Groundnuts are also used as a source for animal fodder. There are three categories of groundnuts: the Hausa groundnut, the Bambara groundnut and the peanut.

Driven by consumers' growing appetite for protein-rich and plant-based foods, global demand for groundnuts is increasing by 4 percent per year. Market Research Future projects the value of global peanut sales alone to reach \$107.4 billion by 2030. Malawi has grown groundnuts for decades. "In the 1980s, Malawi used to be a big exporter to Europe," says PAM Managing Director Ronald Ngwira. Currently, however, Africa is a net importer of groundnuts; global supply is dominated by Argentina, India and the United States. Malawi produces 447,421 metric tons of groundnuts—less than 1 percent of global cultivation.

A Good Match for Malawi

In addition to enjoying strong global demand, groundnuts are suited to Malawi's conditions. Due to the country's landlocked location, agricultural exports must travel long distances to ports in either South Africa or Mozambique. As a semi-perishable product, groundnuts are able to tolerate such journeys without requiring expensive cold storage.

What's more, groundnut plants release nitrogen as they decompose, improving soil fertility and allowing farmers to reduce their fertilizer bill. Soil health has been a major concern in Malawi, where farmers struggle with high levels of acidity and insufficient levels of organic matter due in part to deforestation and less-than-optimal agricultural practices.

Another benefit: Leftover shells from Pyxus groundnut operations can be converted into fuel pellets and green charcoal, reducing the need to cut trees for firewood and potentially saving thousands of hectares of forest. This is a big deal

in Malawi, where few people have access to electricity and the majority of the country's rapidly growing population burns wood as fuel for cooking and energy. Wood is also used by farmers to build barns and cure tobacco. Industry typically relies on coal to fuel its activities. According to Ngwira, the use of groundnut shell-based fuel has already allowed Pyxus to reduce AOTM's factory reliance on coal by 40 percent.

One challenge that has been holding back Malawi groundnut production is the quality of its plant varieties, which has constrained quality and productivity. To unlock the potential of groundnuts for Malawi, PAM has been researching better cultivars. Over the past few years, the company examined 1,000 strains from around the world. Looking for varieties that are high in protein, climate-change resilient and resistant to disease, PAM selected four types and presented them to the ministry of agriculture for approval. The company then invested in irrigation, mechanization and multiplication of the improved varieties to boost farmers' yields and incomes.

Boosting Volumes and Quality

Tapping into its large network of tobacco field technicians, Pyxus also started offering extension services to groundnut farmers. "We have more than 150 qualified extension officers training farmers on a daily basis to assist farmers achieve better yields and quality while also ensuring track-and-trace capabilities to export into international markets," says Ngwira. At 1 metric ton per hectare, average groundnut yields have traditionally been low in Malawi. With better cultivars, inputs and agricultural practices, however, it should be possible to increase those yields to 3 metric tons per hectare, according to PAM. Ngwira says the company will follow the same journey it took when implementing the integrated production system in tobacco, where years of farmer training resulted in substantially improved productivity and loan recovery rates.

PAM's investments in groundnuts are paying off already. In 2021, Malawi's government set the minimum selling price of groundnuts at MKW330 (\$0.32) per kilogram. Owing to the quality produced by its contracted farmers, Pyxus was able to offer a minimum price of MKW440 per kilogram, according to Ngwira.

PAM is also tackling the problem of aflatoxins, poisonous carcinogens produced by certain molds that can impact agricultural crops. Historically, Malawi groundnuts have suffered from comparatively high levels of aflatoxins, but with better agricultural practices, such as quick drying to prevent the formation of fungi, it is possible to reduce contamination to below the tolerances prescribed by export markets.

In March 2022, PAM inaugurated a \$3 million processing



PAM Managing Director Ronald Ngwira (left) examines fuel pellets created with leftover shells from its groundnut operations.

factory in Lilongwe's Kanengo, where it not only cleans, shells and sorts the groundnuts but also turns the leftover shells into fuel pellets. Built in a disused tobacco warehouse, the facility employs more than 100 people and has the capacity to process 50,000 tons of groundnuts per annum. It is the largest groundnut shelling plant on the African continent outside of South Africa.

Addressing Malawi President Lazarus Chakwera and other dignitaries attending the opening ceremony, Ngwira noted that factory was key to unlocking Malawi's potential for agricultural industrialization—which is in line with the government's commitment to promote exports through value addition for agricultural crops.

Ngwira is excited about the prospects for Malawi groundnuts.

In addition to growing demand from major markets such as China and India, there is also a huge appetite for the product regionally. "Currently, most Malawi groundnuts are exported to the Lake Victoria region," he says. Already home to more than half a billion people, the area's population is projected to grow significantly. "Malawi can help supply the protein to feed those people," says Ngwira.

To cater to the anticipated demand, PAM aims to rapidly expand its contracted farmer base from about 7,000 smallholders at the time of the factory opening to about 30,000 in the future. In the process, it will not only create additional sources of incomes for its contracted farmers but also provide Malawi with a welcome supplement to tobacco as a source of much-needed foreign exchange. —T.T.