IMPACT BRIEF 09
Mount Meru Millers, Zambia

Background

In line with its mandate of positively impacting agricultural production and smallholders in Africa, AATIF assesses its progress and impact on seven key outcome areas including (i) employment; (ii) primary agricultural production; (iii) local processing: (iv) trade; (v) outreach to agricultural producers; (vi) environment and; (vii) social and environmental management system. As part of its research efforts and in line with its overall M&E framework, AATIF commissioned an ex-post (baseline, 2020) Rapid Appraisal of Mount Meru Millers Zambia Ltd (Mt Meru) - one of its direct investments in Zambia – to provide baseline information against which to monitor progress and assess impact at the end of the investment in 2026.

Edible Oils in the Filling Room at Mt Meru Plant in 2020
Photo taken by March Associates.

In May 2018, AATIF entered into a USD 5 million loan agreement with a maturity of 7 years with Mt Meru, a family-owned edible oil producing company operational since 2012. The objective of the AATIF investment is to expand Mt Meru's existing operations by installing new machinery as well as storage capacity. The scope for the study entailed the direct operations of the company (soybeans, sunflower and cotton procurement and processing) and along the cotton supply chain. The Rapid Appraisal was conducted between September and October 2020 in Chisamba (Central Province) and Chipata, Katete, Lundazi and Mambwe districts in Eastern Province. Data collection included: i) interviews with management; ii) focus group discussions (FGD) with Mt Meru employees; and household (HH) level interviews with 163 cotton farmers (102 Mt Meru cotton and 61 non-Mt Meru cotton farmers) in the afore-mentioned study districts.

Key Findings

1. Employment

Mt Meru has four categories of employees namely, permanent, fixed-term, seasonal and casual. In 2020, the average number of fixed-term employees was 389 (101 females) up from 383 (102 females) in 2019 and 358 (89 females) in 2018. Likewise, the average number of seasonal employees increased from 9 (2 females) in 2018 to 32 (1 female) in 2019 and 58 (4 females) in 2020. There were on average 25 permanent management employees each year (all males). In addition, Mt Meru hired casual workers on a need basis either as; i) temporal replacements of permanent workers, or ii) additional staff during peak periods[1]. In 2020, there were 333 (80 females) casual workers up from 314 (79 females) in 2019. The estimated total Full Time Equivalent (FTEs) at Mt Meru during the 2020 calendar year was 776 (183 females), representing a 14% growth rate from the level at the beginning of the AATIF credit facility which stood at 680.5 (216 females). In 2019, the number of FTEs was 738 (181.5 females).

Labour employment conditions for permanent, fixed-term and seasonal employees are largely in line with the law. Conditions of employment are shared with the employees, maximum working hours are set at 48 hours per week, workers are entitled to days off on public holidays and remuneration is above the national minimum wage. Besides monthly wages, the above employees are entitled to social security benefits including health insurance. In addition, Mt Meru has a collective agreement with the Union representing workers and the union negotiates the collective agreement with the company for employees every two years. In contrast, un-unionised

[1] Seasonal workers are hired on a temporary basis to perform seasonal tasks lasting more than a month but below six months while casual employees are employed to work on both unexpected (e.g., during death, injury of fulltime staff) and expected tasks lasting between one day to a month.

casual employees are paid below the recommended national minimum wage in addition to not receiving social security benefits. Further, the study noted efforts to comply with the safety requirements as well as to motivate its workforce. This included provision of personal protective equipment (PPE), machinery and equipment to ease the execution of some of the tasks. Nonetheless, findings revealed that Mt Meru was not providing adequate PPE and working facilities (such as chairs and stools). Because of this, during peak processing periods, employees work in tiring positions (while standing for long hours). This leads to employee exhaustion and accidents. The incidence of accidents in 2020 stood at 98, albeit with zero fatalities. Causes of accidents varied and included mechanical and technical faults, employee exhaustion, inadequate provision of PPE, limited knowledge to operate certain equipment and employee negligence. These issues are being addressed by the company which plans to obtain OHSAS certification.

2. Local processing

Mt Meru had in 2020 two crushing plants, one for soybeans and the other for sunflower and cotton. In 2018, the soybean crushing plant had a capacity of 300 MT/day while the sunflower and cotton plant had a combined crushing capacity of 230 MT/day. Other processing facilities documented include two solvent extraction plants with capacities of 300-350 MT/day for soybeans and 150-170 MT/day for sunflower and cotton; one oil refinery plant shared between cotton and sunflower, and soybeans with a capacity of 120MT/day; palm oil fractionation plant with capacity of 200 MT/day; a 60 MT cotton ginnery and a functional packaging plant which produces all required pouches, bottles and buckets. Utilization of the crushing capacity increased from 55% in 2018 to 75% in 2019, resulting in an increase of turnover by 45% from the level achieved in 2018. This was due to investments in storage, processing and packaging facilities, and improved access to commodities. Mt Meru was accounting for about 20% of the market share of edible oils in the country in 2020, which was estimated at 100,000 MT in 2018 (60% imported). In addition, the company had a market share of about 40% of the soya and sunflower meal cake market with the meal acting as input for animal feed production (poultry and beef).

3. Trade

The company uses two approaches, Business to Business (B2B) and Business to Customer (B2C), to market its products. B2B is used to distribute products to retail chain supermarkets, wholesale distributors and food processors/retailers and hotels. B2C approach is used to distribute products to Mt Meru shops and mobile vans. For soy, sunflower and cotton cake/meal, the company sells its products domestically and internationally. In the domestic market, the products are sold to feed manufactures and commercial farmers. At international level, the meal cakes are sold to South Africa, Zimbabwe, Kenya, Tanzania and Namibia. Considering volume of trade, about 22,855 MT of edible oils (sunflower, cotton, soybean and palm) worth USD 48.71 million was sold by the company domestically in 2019 up from about 10,400 MT (USD 11.66 million) in 2017. On the other hand, the findings showed that 46,705.2 MT (USD 18.69 million) and 23,905.40 MT (USD 10.15 million) of soybean, cotton and sunflower meal cakes were sold in 2019 domestically and externally, respectively. In 2017, total domestic and external sales of meal cakes stood at 44,800 MT (USD 23.29 million).

4. Outreach to agricultural producers

Regarding cotton supply, until 2018 Mt Meru relied on other companies for cotton seed. However, due to unreliable supply and price fluctuations, the company established its own cotton outgrower scheme in 2018 with 500 cotton farmers in Lusaka, Central and Southern provinces. Over 14,200 cotton farmers were recruited to grow cotton for the company during the 2019/2020 season. As part of the outgrower scheme, the company provides all the required inputs to farmers who in turn agree to selling any excess cotton to the company. However, the study noted an urgent need for Mt Meru to address the concerns by farmers on prices seed and the quality of inputs (seed and chemicals) distributed if the outgrower scheme is to continue. More than 50% of the farmers had reservations on signing the next contracts due to low cotton prices considering cotton's greater input intensity as well as the poor quality of the inputs which keeps productivity low.

Considering cotton production during the 2019/2020 season, Mt Meru HHs owned and cultivated larger sizes of fields (9.5 ha and 5.4 ha, respectively) compared to non-Mt Meru HHs (owned 5.8 ha and cultivated 4.3 ha). All the HHs in the sample grew cotton while 100% non-Mt Meru and 94% Mt Meru produced maize. Because cotton seed in Zambia is not traded on the open market, farmers in both groups obtained cotton seed from ginning companies. Besides cotton seed, HHs used on average two more additional inputs on cotton, insecticides and pesticides, supplied mostly by ginning companies. Most farmers utilised all the fertilizer

exclusively for maize production despite obtaining the input from both commercial sources and ginning companies as part of the cotton input loan package. Mt Meru HHs obtained better yields in cotton (476.0 ± 41.5 kg/ha) compared to non-Mt Meru HHs (375.9 ± 39.8 kg/ha). Cotton productivity among farmers and in the country in 2020 was not only significantly below the potential cotton yields for Zambian cotton varieties (over 2,500 kg/ha) but had deteriorated over time (from 850 kg/ha in 2012). Due to high production costs, low prices and extremely low yields, HHs had low cotton gross margins (ZMW -359.2 ± 43.7/ha non-Mt Meru HHs and ZMW -397.6 ± 65.3/ha among Mt Meru HHs when family labour was included and ZMW 505.4 ± 134.8 among non-Mt Meru and ZMW 636.9 ± 164.9 among Mt Meru HHs without family labour).

Considering income, Mt Meru HHs earned similar amounts (ZMW 7,291 ± 645) than non-Mt Meru HHs (ZMW 7,081 ± 663) 12 months prior to the study. Mt Meru HHs earned on average ZMW 1,994.0 ± 232.3 (about 27.3% of total household income) from cotton production compared to ZMW 1,527 ± 169 for non-Mt Meru HHs. Consistent with other studies, generally, the prevalence of extreme poverty was high in both clusters in 2020. 58% of non-Mt Meru HHs were extreme poor compared to 64% among Mt Meru HHs.

5. Environment

Efforts to enhance the use of resources were documented. Mt Meru switched to energy saving bulbs in addition to using power factor units[2]. To reduce water wastage through leakages, Mt Meru has a maintenance unit which maintains water and related infrastructure. In addition, to further minimise water usage, after use, the company collects, treats water in the 120,000 litres of waste water/day capacity Effluent Treatment Plant (ETP) and re-uses the treated water for cooling, firefighting, dust suppression and vegetable production. Further, the company uses organic wastes such as husks to fuel the boiler, along with coal and wood. To prevent air and environment pollution, Mt Meru has implemented the following: i) installed cyclones on 2 silo seed cleaners and bag filter on the main boiler in 2019 to control air emissions; ii) paved major driveways in the plant to reduce dust, however, the road from the main road to the plant is not tarred or paved, causing dust outside and inside the entrance area whenever a vehicle enters/leaves the plant; iii) uses recycled water to suppress dust and prevent air pollution; and iv) implements a comprehensive Greenhouse Gas (GHG) emissions assessment, volumetric dust and effluent monitoring covering all key activities every six months.

6. Social and Environmental Management System

Efforts were noted to adhere to the recommended standards. In 2012, Mt Meru undertook an environmental impact assessment and was compliant with the Environment Management (Licensing) Regulations Act of 2013. In addition, Mt Meru renewed pesticides and toxic substances, air emissions and hazardous waste management licenses. Further, Mt Meru has a team of five dedicated staff to work on environment and OHS matters. Further, the company has several procedures and manuals related to OHS including emergency response and prevention. However, Mt Meru continued to experience gaps in S&E practices and management during the first two years of the AATIF investment period (2018-2020). Notable among the gaps was inability to complete the development of a fully-fledged Social and Environment Management System (SEMS).

For more information on AATIF impact measurement and intensity levels, please see AATIF webpage: https://www.aatif.lu/impact-measurement-framework.html

Imprint

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[2] The power factor unit reduces load current demand, thereby reducing the maximum power demand. The motors operate at optimum efficiency hence reducing the tear and ware of the consuming machinery and equipment. On the other hand, excess power is then re-routed to another customer.