IMPACT BRIEF 11
African Milling Limited, 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. Therefore, AATIF commissioned a mid-line Rapid Appraisal of African Milling Limited (AML) - one of its direct investments in Zambia.

Maize milling at AML in 2020
Photo taken by March Associates

In May 2018, AATIF entered into a USD 11 million collateral management facility agreement with AML, a family-owned maize and wheat processing company in Lusaka, founded in 2006. The objective of the AATIF credit facility was to support AML with working capital and exclusively utilise the funds for the purchase of maize and wheat to make use of the company's expanded capacity. The initial loan agreement had a 15-month term and was renewed in May 2019 to cover the 2019 and 2020 agricultural marketing seasons. The purpose of the Rapid Appraisal was to collect and analyse a selected and limited set of comparable data, as a basis for assessing the overall impact of AATIF and to learn for future investments. The study encompassed the direct operations of the company (maize and wheat processing) and the entire maize supply chain (maize farmers and aggregators). The study was conducted in October 2020 in Chiparamba, Katete and Sinda Districts of Eastern Province and Chilanga, Kafue and Lusaka Districts of Lusaka Province. Data collection involved; i) interviews with AML management and employees; and ii) household (HH) level interviews with 160 maize farming HHs (102 farmers supplying maize to AML through traders and 58 non-AML/spot farmers) in the afore-mentioned study districts. The study included non-AML farmers in an effort to control for the influence of other variables other than HH participation in AML's supply chain. However, because AML aggregators bought maize from any HH with surplus production, all HHs in the visited villages which had surplus production had sold the crop to AML aggregators and other buyers. This made non-AML HHs to be different from AML HHs. Particularly, they were characterised by producing smaller surplus maize volumes for the market.

Key Findings

1. Employment

AATIF investments contributed to increasing employment opportunities at AML due to the increased utilisation of the processing plant made possible by the AATIF credit facility to the company to procure sufficient quantities of raw materials in 2018 and 2019. The number of permanent and seasonal employees increased from 102 fulltime (1 female) and 31 seasonal (all males) in 2018 to 212 fulltime (4 females) and 30 seasonal (12 females) employees in 2020, exceeding the set target by 18.6%. The study also found that AML hired casual workers on need basis. In 2020, the company hired a total of 889 casual employees (74 per month on average), resulting in total fulltime equivalent (FTE) of 283 (10 females) during the 2020 calendar year.

AML employment conditions were mostly in line with the labour laws. In addition to monthly wages, fulltime employees with confirmed contracts were paid gratuities and social security benefits, including health insurance cover. In contrast, because payments of allowances (housing, lunch and transport) and social security benefits to employees working/have worked less than three months is at the discretion of the employer, fulltime employees on probation (during first 1-3 months) were paid only the basic pay (i.e., without allowances and social security benefits). On the other hand, seasonal employees were paid a negotiated rate per task

accomplished while casual employees were paid a daily wage. Compared to the recommended wages, payments to seasonal and casual employees were above the minimum monthly basic pay but below the minimum monthly gross wage. Like fulltime employees on probation, casual and seasonal employees were only paid basic pay. AML had been striving to provide a conducive and safe working environment in compliance with the requirements as well as to motivate its workforce, including the provision of Personal Protective Equipment (PPE). Nevertheless, the study noted the need for continuous improvement on Occupational, Health and Safety (OHS), particularly, provision of trainings on OHS issues and use of PPE to the workers, as sometimes they do not comply with its use.

2. Local processing

Starting with maize milling in 2007, the company was operating integrated maize and wheat milling processing facilities in 2020. AML almost doubled its maize processing operations after the construction and commissioning of the new and second maize milling plant in 2019 (from 336 MT/day to 504 MT/day). The expansion was attributed to AML's strong performance over the years, a growing market demand and credit support from financing institutions. In 2020, AML operated 27 days per month and achieved approximately 4,500 MT/month and about 3,000 MT/month capacity utilization for maize and wheat, respectively.

Value addition to AML from processing one MT of maize in 2020 was estimated at ZMW 1,564. Considering the extraction rates for maize processing[1], the value of one MT of processed maize products stood at approximately ZMW 4,164 compared to the cost of the raw grain which stood at ZMW 2,600/MT. For wheat the added value to the company from processing one MT of the commodity in 2020 was ZMW 2,016. The value of processed wheat stood at about ZMW 8,064/MT compared to the cost of the raw wheat grain which stood at about ZMW 6,048/MT.

3. Trade

Processing activities by AML have created a market for smallholder maize and commercial wheat farmers in addition to facilitating local and regional trade, as the company sources 100% of its maize and wheat locally. Prior to 2018, export sales to the Democratic Republic of Congo (DRC) and Zimbabwe accounted for over 70% of the maize flour sales. However, the company changed its focus to local sales between 2018 and 2020 following the signing of supply agreements with leading supermarkets in the country and the increased distribution to local retailers as part of the strategy to reduce the risks associated with the recent Government restrictions on staple food exports. The continued increase in local demand for wheat flour in recent years reduced the share of exports from above 60% prior to 2015 to about 40% afterwards mainly to DRC.

4. Outreach to agricultural producers

The company was purchasing 40-50% of its maize directly from small and informally organised local commodity traders who were buying the commodity from smallholder farmers in Eastern, Central, Lusaka and Northern Provinces. AML purchased the remaining 50-60% of maize indirectly from traders through its sister company, Nyimba Investments. In contrast to maize, AML procured wheat from commercial farmers and agents on advance payment basis. In 2020, 149,271 MT of maize was procured up from a combined total of 55,407 MT in 2018 from about 123, 578 maize farmers in Eastern, Central, Lusaka and Northern Provinces. In 2019, a total of 82,863 MT of maize was procured by AML for processing. The quantity of wheat procured had remained almost the same since 2018. In 2018, AML procured 21,830 MT of wheat while in 2019 a total of 21,924 MT of wheat was bought. In 2020, a slightly higher quantity of wheat (25,970 MT) was procured. AATIF is working together with the company in identifying options for improving the efficiency of the maize supply chain, with the possibility to reach out directly to smallholder farmers.

Regarding land ownership among maize farming HHs during the 2019/2020 season, taken together, AML and non-AML HHs owned on average 4.8 hectares (ha) of land for farming activities. AML HHs cultivated larger sizes of fields (5.0 ha) compared non-AML HHs (1.8 ha). Indicating high dependence on rainfed agriculture, each HH allocated 79% of the land for cultivation during the rainy season while only 2.1% was under cultivation

[1] i) 66% Breakfast – fine meal used to make porridge (10-25kg bags); ii) 19% Roller Meal – more coarse meal used to make more firm / pasty porridge (25kg bags); and iii) 15% Maize Bran – used for stock feed (23kg bags).

during the dry season. Due to the relative importance of maize in food security, nearly all (99% AML HHs and 100% AML HHs) the HHs in the sample grew maize in addition to other crops. On the other hand, AML HHs allocated about 2 ha of land to cultivate maize compared to 1.2 ha of land used by non-AML HHs. Compared to the national average (2.1 MT/ha), AML HHs had better maize yields (2.9 MT/ha) than non-AML HHs (1.8 MT/ha). Regarding input use and cost, majority (74%) AML HHs purchased seed and other inputs compared to their non-AML counterparts (47%). Further, 94% of AML HHs that purchased inputs during the 2019/2020 agricultural season used fertilizer in at least one crop field during the 2019/20 season compared to 71% for non-AML HHs. Considering income, AML HHs earned more HH income (ZMW 16,683.7 ± ZMW 4,214) 12 months prior to the study compared to non-AML HHs (ZMW 6,352.7 ± ZMW1,065). AML HHs earned ZMW 10,737 from maize farming, representing 71.6% and 64.4% of agricultural and total HH income, respectively. Consistent with other studies, generally, the prevalence of extreme poverty was high (47% AML HHs and 55% non-AML HHs) in both clusters of maize farming HHs in 2020.

5. Environment

AML increased the efficient use of its resources, processing infrastructure and facilities in 2020 due to growth, particularly the expansion of the plant as illustrated above as well enhanced access to raw materials. Other measures employed to enhance efficiency include water and energy saving technologies and action such as energy saving bulbs and power factor units[2], resulting in energy consumption savings of about 30%. Further, AML has a maintenance unit that keeps water and related infrastructure in good condition. Nonetheless, the company did not have any air pollution control measures in place other than control of dust using drum sleeves. To reduce dust emissions, the company will make efforts to educate farmers to deliver cleaner maize. Additionally, the company had not yet implemented a comprehensive Greenhouse gas (GHG) emissions assessment covering all of AML's activities, but is implementing some measures as reducing the use of generators to the minimum necessary.

6. Social and Environmental Management System

Progress was noted in some aspects of social and environment (S&E) management. AML hired 3 team members to work on S&E issues (one left the company in 2020). The company developed and adopted an OSH Policy in 2020. Further, AML started developing a Stakeholder Engagement Plan and Grievance Procedure. Other achievements included: i) obtaining all necessary approvals and waivers from the environmental authority regarding the Environmental Impact Assessment and Environmental Management Plan requirements for historical, current and proposed activities on the AML plant and ii) establishment of a comprehensive environmental legal and permit register. Notwithstanding, the company had continued to experience a challenge of limited human/internal capacity in the management of S&E matters but is working on improvements of the system and capacities with the support of AATIF.

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