IMPACT BRIEF 04
WIENCO Ltd., Ghana

Background

In line with its mandate of positively impacting smallholder farmers in Africa, AATIF assesses its progress and impact on four key outcome areas including (i) agricultural production and productivity, (ii) employment, (iii) income, (iv) living and working conditions, and (v) risk exposure, mitigation and coping strategies. As part of its research efforts, AATIF launched an impact evaluation of one its investments, Wienco Ghana Ltd (since 2020, RMG Commodities Ltd). The AATIF extended a loan for a 5-year tenure in 2013 to be used for a) pre-financing inputs for smallholder farmers of associated outgrower schemes, and b) acquisition of cotton and maize from Wienco associated outgrowers. The impact evaluation will shed light on the causal link between participating in the Wienco supported maize out-grower scheme Masara N'Arziki (Masara), and improvements in the main outcome areas as mentioned above. The baseline data were collected in the first quarter of 2016 and key findings look encouraging and will prepare the ground for the mid-term (2019) and final evaluation (2021). The baseline used three survey groups for comparison: i) 'Masara farmers' (current Masara out-growers), ii) 'drop-out farmers' (former Masara out-growers) and iii) 'comparison farmers' (maize farmers who have never been Masara out-growers). The key findings are summarized below.

Key Findings

The baseline report observed differences between participating and non-participating farmers in a sample of 1682 farmers (12% female) living in 60 rural villages in the Upper West Region of Northern Ghana. Yet, the presented results cannot thus far be interpreted as causal impacts of the Masara scheme but, at best, taken as indicative of potential causal impacts. Also, when interpreting these results, it should be noted that in 2016 Masara delivered fertilizer too late, probably causing major yield shortfalls for many of its members. Below is a brief summary of the baseline findings for each of the outcome areas:

1. Agricultural production and productivity levels

The socio-demographic characteristics of the compared groups are largely similar, albeit with some important exceptions. In particular, Masara farmers tend to have larger landholdings, confirming the selection of slightly larger farms into the scheme. All groups use around 70% of their land (6.5 acres for Masara, 5.3 acres for drop-out and 3.2 acres for comparison farmers) for maize cultivation, and around 20% for the cultivation of food crops and other cash crops.

There is a large and significant difference between Masara members and control farmers regarding the maize variety planted. Masara farmers rely almost exclusively on the hybrid varieties White and Yellow Pannar, whereas the control groups also employ traditional varieties on roughly a third of their plots.

The data indicate more frequent application of good agricultural production techniques on plots of farmers registered with Masara in comparison to drop-out and comparison farmers (e.g. more Masara farmers plough with tractors, plant in rows, and use one seed per hole). Importantly, drop-out farmers apply good agricultural practices more often than comparison farmers, which may indicate persistent effects of the scheme's extension services, even after farmers drop out.

The most remarkable differences between the farmer groups can be observed with regards to agrochemical input application. On 98% of Masara-registered plots, farmers apply fertilizer and weedicide, much more than comparison plots with 66% fertilizer and 56% weedicide application rates. Again, higher application rates among drop-out farmers may be an indication of persistent effects of the scheme on agrochemical input use.

Notwithstanding operational difficulties in fertilizer delivery by Masara during the baseline season, yields on Masara-registered plots are found to be much higher than on non-registered plots of both members and non-

members (means and standard errors are 854 [29] kg/acre for Masara farmers, 669 [30] kg/acre for drop-out farmers, 454 [14] kg/acre for comparison farmers). This is likely to be associated with improved management and input use, as confirmed by the qualitative evidence highlighting improved access to quality input and services as key reasons for farmers to join Masara. However, caution is advised if concluding a causal interpretation of these comparisons as they could likely be the result of (de-)selection effects.

2. Employment

While the total hours worked per acre of maize is similar for Masara and comparison farmers, there are considerable differences in labour composition: Masara farmers tend to rely more on hired labour. Masara and drop-out households also use more female workers than comparison households.

Labour productivity on farms of both Masara and drop-out farmers is significantly higher compared to comparison farmers. Any overall differences in average wages or salaries between participating and non-participating farms are not detected, but wages paid to female workers are found slightly higher for Masara members as compared to comparison farmers.

Work of children below the age of 15 is quite common and family children are working in 42% of Masara households and in 38% of drop-out and comparison households. Children are used primarily for planting, harvesting, shelling and transporting, and also agrochemical input application. Masara households engage children more often for shelling, transporting, but also agrochemical input application. The latter constitutes hazardous child labour and is a human rights violation that needs to be addressed.

3. Income

Masara members have considerably higher overall production costs than other farmers, driven mainly by the comparatively high level of expenditures for fertilizer. It thus remains unclear whether higher yields translate into higher income on average. As a high share of Masara farmers report costs that are higher than the gross production value, Masara farmers exhibit on average even slightly negative net maize income. There are moreover considerable gender differences in income from maize, which seem to be driven at least partly by unequal access to land.

4. Living conditions and working conditions

Non-income indicators of material well-being (asset ownership and expenditure) suggest that Masara farmers fare better than non-members, which casts some doubt on the potentially negative impact on net maize incomes. Masara farmers seem to be wealthier (as measured in terms of household assets and expenditure) than drop-out farmers who are again better off than comparison farmers. Results from the midline data collection will provide a more robust basis to further investigate these conflicting results.

The ratio of school age children in the household that are reported to attend school lies around 91-92% for all groups with no significant differences between participating and non-participating farmers.

Masara farmers seem to be located in villages that are somewhat less well provided with infrastructure and government services (markets, banks or microfinance institutions, elementary schools, secondary schools, pharmacies, agricultural extension offices), albeit virtually none of the differences are statistically significant.

5. Risk exposure, mitigation and coping strategies

In line with the slightly negative maize income, most farmers in all three groups report a considerable harvest loss in 2016. This is mainly attributed to the effects of bad weather (droughts, unusual timing of rainfall, and floodings). For Masara farmers, late delivery of inputs plays a similar important role with 53% of farmers who are affected by a shock attributing the loss to the delay in inputs.

41% of drop-out farmers report late inputs delivery as main reason for leaving the scheme. Other common responses were dissatisfaction with Masara (53%) and excessively high prices of Masara inputs (44%). On average, Masara farmers report experiencing more frequent shocks, but also shorter recovery times. This may be explained by differing coping strategies: Masara farmers use more often financial means to respond to shocks (using savings, selling stored goods) than comparison farmers.

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Imprint

Africa Agriculture and Trade Investment Fund
31 Z.A. Bourmicht
L-8070 Bertrange
Grand Duchy of Luxembourg
www.aatif.lu
info@aatif.lu