

ITC's contribution to export competitiveness: emerging insights from the Kenyan avocado sector

This document gives an overview of the emerging findings from the impact evaluation for the evaluation of the International Trade Centre's Netherland Trust Fund Export Sector Competitiveness Programme in the Kenyan avocado sector – conducted under the PRIME umbrella.

ITC support to the avocado sector

The overall objective of the project is to improve the export performance of the avocado sector in Kenya by creating greater exporter competitiveness, thereby enabling low income farmers and SMEs to benefit from increased exports. Avocado is grown in all eight provinces of Kenya except for the North-East, where it is too dry and hot for any sustainable growth. Local varieties dominate Kenyan production, which are, however, not suitable for export. The varieties most suitable for export, namely the Fuerte and Hass varieties, only make up 22% and 8% of total avocado farming in Kenya respectively. This imbalance represents a big challenge for the avocado sector. Kenya's failure to adapt its production profile to the evolving global demand has caused its global market share to decline by one third (from 2.5% in 2001 to 1.6% in 2012)

PRIME impact evaluation

The impact evaluation in Kenya looks into the benefits of ITC support at farm household level. To do this, it follows a matched difference in difference design in a sample of avocado farm-household that were supported (directly or indirectly) in quality improvement to meet the export requirements and a comparable group of non-supported farm-households. To support claims at the level of the farmer, the project will look into changes at the level of farmer groups, SMEs and TSIs; the main focus of project activities. This policy brief builds on the data collected with three research tools: the ITC-monitoring questionnaire at SME level, a farmer group capacity assessment tool and a farm-household survey.

Sample used in the PRIME research	ITC supported	Not supported	Total
SMEs	12	0	12
Farmer Organizations (FOs)	4	13	17
Producers that are member of supported FOs*	125	666	791
Producers that live in a village with members of supported FOs*	385	406	791

*this is the same group of producers.

The farmer survey is implemented at baseline (2015) and at end-line after project activities have ended (2017). The SME data is collected in 2015 and 2016 as part of programme's monitoring system. This report outlines some of the emerging findings from the data available mid-2016, and therefore inherently descriptive, without yet making any inferences about effectiveness of ITC support.

Findings from the baseline

Farmer Organisations

The dataset on Farmer Organisations' (FOs) consist of 17 FOs from the Kandara sub-county in Kenya, province of Muranga. Most were founded in 2013 or later. They organise to get access to better prices, collective marketing, fight outbreak of diseases and increase bargaining power. All but one are formally registered organizations. At the moment of data collection (January-February 2016) four farmer groups had a contract with an SME. Likely – due to the harvesting periods of the two avocado varieties - other FOs will have followed mid-2016 and will be interviewed in a later stage.

FOs are ranked, based on the baseline survey data, into three levels based on their Capacity Performance Index. This index helps to identify capacity strengths and weaknesses. Level 1 constitutes primary beneficiaries of the capacity building exercise while Level 2 constitutes FOs which require some capacity enhancement to qualify as Service Providers. Lastly; Level 3 constitutes FOs that can be used as Service Providers which are capable enough to provide services to Level 1 FOs.

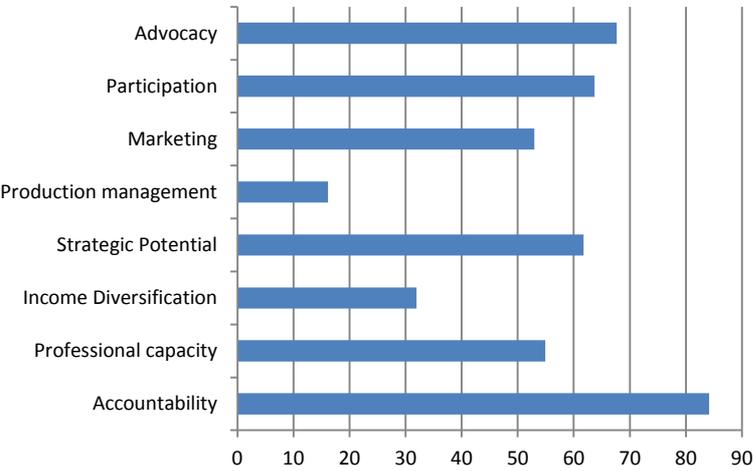


Figure 1: Capacity Performance Index Farmer Organisations

Out of the 17 FOs, only one is ranked as level 3. The rest are all either level 2 or level 1. That means that almost all of the FOs constitute targets for capacity building, in order to be sufficiently strong as a service providers to farmers. Most FO's tend to perform especially well on the accountability, advocacy and marketing, but poorly on production management (see figure 1). This points to their strength as intermediary groups for SME offered services, but also to current weakness in managing the activities necessary for product upgrading and quality control.

Only 3 out of 12 FO's indicated that they had never received any support from external agents (private or public). These are the same FOs which scored below average on the CPI. The average CPI of FOs that are linked to ITC supported trading companies is lower than that of the comparison group. The 4 FOs that contracted with a ITC supported firm were all established in 2015, which makes them among the most recent FOs in the dataset. Three out of these four FOs are categorised as level 1, and only one as level 3. This farmer group had received extensive training and support by a trading company during group formation and in post-production and marketing practices.

The support provided by the international trading companies is important and outweighs the support received from other sources, like NGOs or public sector. A large majority of FO's has received training in production practices service and in post-harvest handling service. To a lesser degree did they receive support in marketing service, access to inputs and organizational strengthening.

Avocado producers

A key component to the evaluation is a matched difference in difference design in a large sample of avocado farm-households that are member of the supported FOs and a comparable group of non-supported farm-households. The members of FOs that are linked to ITC supported companies are expected to receive training on good agricultural practices in avocado cultivation and postharvest handling to meet the export requirements. Between December 2015 and February 2016, 791 surveys were conducted; 125 among members of ITC supported FOs, 666 among comparable producer who are not a members of a supported FO. Almost 50% of the sample of 791 farmers lives in a village where some producers work with the FOs that are likely to be supported by the SMEs. While at baseline only 15% of the farmers indicates to be a member of a FO this number is likely to increase in response to ITC support in these locations.

The numbers of trees managed by the different groups of farmers differed significantly (table 1). Farmers that live in villages where no farmer group is active tend to have more Hass trees, while the ones that could join a farmer group but did not do so are significantly smaller.

Table 1: Number of avocado trees in PRIME sample	Overall average	Member of supported farmer group		Not member but living in villages with a farmer group	
		no	yes	no	yes
Number of productive Hass avocado trees	8.43	4.45	12.49	9.81	6.98
Number of productive Fuerte avocado trees	5.11	4.92	5.29	5.58	4.61
Number of productive Local avocado trees	1.13	1.34	0.91	1.05	1.21

The average price of an avocado reported by the farmers per piece is 3.99 Ksh for Hass, 2.21 for Fuerte and 1.76 for local avocados. Average yield per tree is 500 avocados. Productivity for Hass is however significantly lower for the Hass variety (515 per tree) compared to Fuerte (587 per tree) with an average of 500 including all grades. On average these price and productivity level translate into an income of 18110.1 (€163) per year (for 2014).

When analysing price and yield by main market channel (middlemen versus other) we find that the average price is significantly higher for producers that supply avocado to an SME or FO compared to those that supply to middlemen (see table x). This price difference implies that the risk of side-selling is relatively low, which may increase the incentives for the SMEs to invest in service provisioning to these farmers. Surprisingly, we find that farmers who supply to middlemen generally have higher yields per tree.

Table 2 Price and productivity in PRIME sample	Supplying to an SME or FO	Supplying to middlemen	difference
on-farm price Hass (KSh)	4.27	3.23	1.04
on-farm price Fuerte (KSh)	2.20	1.98	0.22
productivity per tree Hass	415.09	528.95	-113.87
productivity per tree Fuerte	427.04	603.77	-176.73

We also find that contractual arrangements between SMEs and farmers are not uncommon in the area. 14 out of 17 FO's are already involved in a contract farming arrangement with a private company, next to selling to middlemen. The data shows a clear increase in contractual arrangements from before 2015 to 2016. Especially contracts including agreements on the variety of avocado to be planted and the quality of avocados to be delivered. But also the quantity to be delivered, minimum prices to be paid, advance payments, packaging and handling and in transport of harvest, were included significantly more often in agreements in the 2016 season.

Different factors can contribute to avocado quality. The factors affecting quality of avocados that was listed by most farmers is the control of pests and diseases. Using the right variety/planting material and harvesting practices were less often listed by farmers as affecting quality, while these are crucial factors.

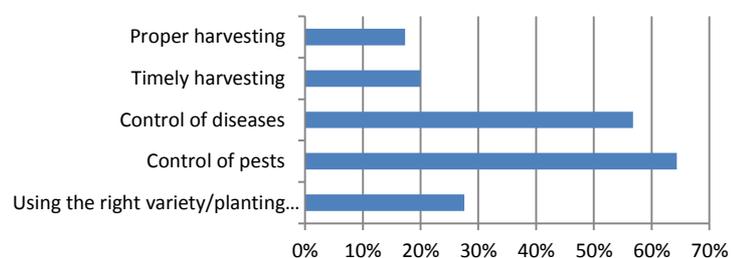
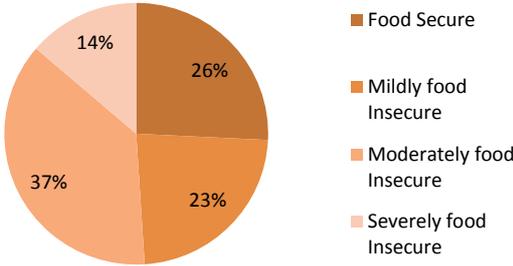


Figure 2: Factors that contribute to avocado quality according to producers

While poverty alleviation is not the projects' direct and immediate aim, it is noteworthy to see that – using the FAOs household food insecurity access scale - only 26% is food secure, while 14 % of the households is severely food insecure (see figure x). This indicates the relevance of ITCs support program.



Trading companies

The dataset on SMEs consists of 12 Kenyan export companies active in the avocado sector. One third of these companies are exporting and producing avocados. The other companies mainly source from producers and occasionally from an intermediary that buys directly from farmers. One SME was founded in 1966, the rest originates from 2001 or later. Company's size differ greatly, ranging from 7 to 500 employees with most companies varying around 50 employees. Some focus primarily on avocados, whereas others also export a variety of other fruits and vegetables.

Figure 3: Household Food Insecurity Access in PRIME sample

Fuerte and Hass are the main varieties of avocados sold. Total exports range between 5,000 tons and 28.8 tons and avocado exports between 4,000 and 28.8 tons, according to data collected at a business conference in 2015. We find that 35 – 40 % of the households already had received some training regarding avocado production, harvesting, standards, prices, pest control and the avocado markets (figure x). Interestingly, this previous training is 10% to 15% lower in villages that have ITC supported FOs. However, this experience with earlier training programmes on avocado production suggests that the supported SMEs may need to offer additional incentives to farmers and farmer groups, additional to training in order to create real impact.

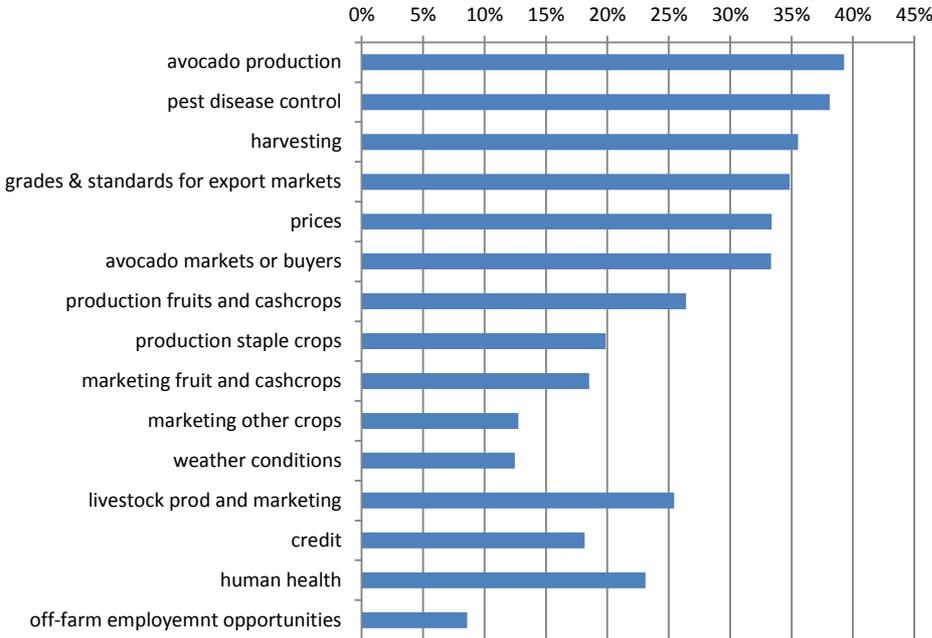


Figure 4: Training received by avocado producers in the PRIME sample producers

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