

Learning Paper

Maximising the Impact of Outgrower Schemes: Opportunities, Challenges, and Lessons from the AECF

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The Africa Enterprise Challenge Fund (AECF) is a multi-donor funded financing vehicle which works to stimulate private sector entrepreneurs in Africa to find innovative and profitable ways of improving market access, and the way markets function, for the rural poor. The Fund awards grants and non-recourse loans to projects focused on agriculture, renewable energy and adaptation to climate change, and access to financial services and information, with the aim of improving households incomes and reducing rural poverty.

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The AECF is a special partnership initiative of the Alliance for a Green Revolution in Africa (AGRA).

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IPE Triple Line has worked with KPMG IDAS since the AECF was launched in the capacity of the AECF's monitoring, evaluation and learning partner.

1. Executive Summary

The AECF is a US\$247m multi-donor fund providing grants and non-recourse loans to over 250 businesses. By financing innovative and commercially sustainable business ideas, the AECF aims to improve the way agricultural market systems work and facilitate market entry for poor rural households (defined as those living on less than USD\$2 per day) and enterprises across sub-Saharan Africa.

This paper reviews the experience of outgrower projects funded by the AECF. Outgrower projects are a significant segment of the entire AECF portfolio, with 51 being funded across 14 different countries and a commitment totalling USD\$33.4m. This paper addresses the following objectives:

- Improving our understanding of how AECF-funded outgrower projects benefit (or fail to benefit) smallholder farmers
- Identifying common characteristics of successful outgrower projects, including the most successful model type, from the perspective of both the smallholder and the company
- Diagnosing common challenges faced by outgrower projects and analysing how AECF grantees have overcome these challenges

Outgrower schemes are formed around an agreement between a smallholder farmer and a contracting company who makes a pre-harvest commitment to buy their produce.

Outgrower projects which work through pre-existing farmer cooperatives or associations are the most successful in terms of outreach, whilst projects which maintain a very close relationship with outgrowers ... are the most successful in terms of impact on smallholder income.

There is however considerable variation in the extent of this relationship. While some are structured around written contracts and may also involve the supply of credit and inputs from the firm to the smallholder, other schemes work through informal agreements with neither extension services nor supply of inputs and credit. In order to assess differences between various schemes, this paper categorises the AECF-funded outgrower projects into 5 distinct typologies, based primarily on the nature of the relationship between outgrower and firm.

Type	Definition
Informal	Informal arrangements on an annual or seasonal basis, or spot-trading between farmers and company/traders, with no specification or requirements as to quantity and no credit or extension services provided.
Intermediary	Agricultural commodities pass through an intermediary organisation (e.g. local buyers, lead farmers, or farming groups) before going to commercial buyer or processor.
Multipartite	Outgrower project a partnership between a commercial buyer of the produce and one or more MFIs, NGOs, and/or input suppliers.
Centralised	Company provides inputs and/or extension services and buys produce, usually subject to strict product quality requirements.
Nucleus-estate	Company has a central farm and processing facilities, and supplements own crop production with supply from outgrowers.

The AECF portfolio of outgrower projects was analysed using this typology, and supplemented by a series of interviews with AECF-funded outgrower projects. This analysis revealed the following series of findings:

- The AECF has supported outgrower schemes across the full range of models, with centralised models making up most (41%) of the portfolio. As expected, most (90%) of all schemes provide extension services, and very few include staple crops as a focus.
- In terms of developmental impact, intermediary schemes have been most successful in terms of outreach, while centralised models have been most successful in terms of generating household impact. Commercially, centralised models appear to perform best, with multipartite models struggling – although projects may see stronger results only further into implementation.
- Outgrower schemes face significant implementation challenges, with bureaucratic delays a particular problem that can be fatal to projects. Side-selling can be a major and complex challenge, which can't be solved just through raising prices
- Implementing smallholder training successfully is a crucial success factor, and recruitment of participants in outgrower schemes should leverage existing relationships with smallholders, rather than establish greenfield projects
- Although outgrower schemes work with the poor, the fact that participants are usually required to have access to land means that they do not primarily work with the poorest in society, and work primarily with men. Finding ways of working with the bottom of the pyramid and in a way that benefits women remains a challenge.
- Monitoring outgrower schemes can be very difficult, although projects can use technology and the aggregation opportunities provided by farmer associations to overcome this problem

Reviewing how successfully projects have performed, both from a development perspective and from a commercial business perspective, suggested that some types of outgrower schemes do perform better than others. Outgrower projects which work through pre-existing farmer cooperatives or associations are the most successful in terms of outreach, whilst projects which maintain a very close relationship with outgrowers by directly supplying inputs, credit, and training, are the most successful in terms of impact on smallholder income.

The relationship between project components such as credit supply, and problems faced by companies such as side-selling, or maintaining quality and yield were also investigated. While side-selling was identified as a common issue, the key cause was not other buyers offering higher prices (as is commonly understood), but rather cash-flow problems which compel

The importance of maintaining as close a relationship with outgrowers as is logically and financially feasible. A closer relationship develops loyalty and trust, which both increases yield and product quality through better implementation of improved farming practices, and helps deter side-selling.

farmers to sell at lower prices to alternative buyers prior to harvest. Bureaucratic delays were also highlighted as a major challenge, particularly because they can mean that it is only several years into implementation that outgrower projects start generating significant cashflow for either the smallholders or the commercial partner.

Key recommendations for implementers of outgrower schemes include the importance of maintaining as close a relationship with outgrowers as is logically and financially feasible. A closer relationship develops loyalty and trust, which both increases yield and product quality through better implementation of improved farming practices, and helps deter side-selling. For development programmes, this paper highlights the fact that outgrower projects generally take longer to show results from both a financial and from a development perspective, compared to other agribusinesses. There is also a need to recognise that the cost of monitoring requirements will vary significantly by outgrower programme.

AECF-funded outgrower programmes have had relatively limited success in making projects and benefits accessible to women, with some notable exceptions in the poultry schemes. Land ownership and access to credit acted as significant barriers to participation for women. As a start, development programmes working with outgrowers should work to generate gender-disaggregated data. This will help identify particularly problematic areas, as well as areas of opportunity. Poultry appears to have been successful since it requires little land, and can easily be combined with other household tasks since it does not take women into the fields away from the house.

Outgrower programmes have the potential to make a major development impact across rural communities in Africa, yet face considerable challenges in doing so. Adapting the recommendations of this learning paper will assist future projects reach commercial sustainability whilst improving the livelihoods of smallholder farmers.

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1. Introduction

The Africa Enterprise Challenge Fund (AECF) is a multi-donor supported Challenge Fund (CF) formed under the Alliance for Green Revolution in Africa (AGRA). The AECF is a US\$247m multi-donor fund providing grants and non-recourse loans to over 250 business ideas focused on agribusiness, renewable energy and adaptation to climate change, and access to information and financial services. By financing innovative and commercially sustainable business ideas, the AECF aims to improve the way agricultural market systems work and facilitate market entry for poor rural households and enterprises across sub-Saharan Africa. The target population for the AECF is the rural poor living on less than USD \$2 a day.

Outgrower schemes are a core part of the AECF's portfolio, with currently over 50 active projects across 14 countries in sub-Saharan Africa. Outgrower schemes are arrangements between companies and smallholder farmers, in which companies agree to purchase agricultural products from smallholders. Within this definition, there is a huge amount of variation, with considerable diversity on crop type, project size, and relationship between firm and outgrower.

For firms, outgrower schemes can provide a regular, dependable and higher quality supply of agricultural products when compared to buying on the open market. For smallholders, they can provide links to larger national and export markets, access to high-quality inputs and credit, and reduce risk.

This paper aims to identify and disseminate key learnings drawn from an analysis of the outgrower models funded by AECF. This learning paper has three primary goals:

- Improving our understanding of how AECF-funded outgrower projects benefit (or fail to benefit) smallholder farmers
- Identifying common characteristics of successful outgrower projects, including the most successful model type, from the perspective of both the smallholder and the company
- Diagnosing common challenges faced by outgrower projects and analysing how AECF grantees have overcome these challenges

This paper aims to act as a useful guide in developing and managing outgrower projects in the future, and could contribute to the development community's understanding of how challenge funds and other development programmes should select and support outgrower schemes.

Before analysing the AECF's portfolio, **Chapter 2** provides a brief overview of the existing literature on outgrowers. The review focuses on understanding the core questions around outgrowers and constructing a typology for outgrower projects.

Chapter 3 examines the entirety of the AECF's portfolio of outgrower projects. Using the typology derived from previous research, we categorise the AECF's outgrower projects into different models. Drawing on information contained in grantee progress reports and the FM's regular site monitoring reports, we look for variables correlated with project success as viewed both from the perspective of the company and from the perspective of the smallholder.

In **Chapter 4**, we delve deeper into a handful of AECF projects using a case study based approach to further understand how AECF projects have overcome common challenges faced by outgrower schemes, and the extent to which these solutions are applicable in different contexts.

Finally, in **Chapter 5**, we outline our conclusions from the analysis of the AECF portfolio, and our recommendations for the design, funding and implementation of future projects with an outgrower element.

2. Understanding outgrower themes

2.1. What is the definition of an outgrower scheme?

There is no widely accepted definition of an outgrower scheme, which reflects the considerable variation between different models and arrangements. The defining feature of these schemes is the relationship between the smallholder farmer and the buyer of the produce. This relationship can vary from an almost-open market arrangement where the buyer purchases goods from pre-registered producers, to a highly integrated contractual arrangement where the buyer provides a range of goods and services inputs to a smallholder in exchange for a guaranteed purchase of outputs at an agreed price.

Outgrowers and gender

The term ‘outgrowers’ is used universally in a gender-neutral way, meaning that it does not differentiate between male outgrowers and female outgrowers. The consequence of that is, when using the term outgrowers, the audience has little understanding of any gender disparity. The use of gender-neutral terms often leads to data which is not gender-disaggregated and prevents identification of any gender disparity.

The FAO has defined outgrower schemes as “a contractual partnership between growers or landholders and a company”¹, which is a very broad definition relying just on the existence of some kind of partnership between an entity and farmers. Other definitions envisage a much tighter contractual arrangement. For example, DFID argues outgrower models “involve a firm providing ‘inputs’ on credit in exchange for exclusive purchasing rights over a crop”². This definition involves two new components – input supply on credit and exclusive control over produce.

For the purposes of this learning paper, we rely on a simple definition of the outgrower process as provided by Minot (2007):

“Agricultural production is carried out according to a prior agreement in which the farmer commits to producing a given product in a given manner and the buyer commits to purchasing it.”³

This definition covers the full range of outgrower schemes funded by AECF, some of which do not involve provision of inputs or exclusive control over produce. It also recognises that very limited, small-scale outgrower projects may not have formal contracts but instead rely on pre-defined informal agreements. Importantly, the beneficiaries of an outgrower scheme are producers of primarily agricultural products (as opposed to schemes which focus on input provision for smallholder farmers, in which beneficiaries are primarily consumers of inputs and do not sell their produce back to the scheme).

It is also worth noting that in the wider literature the terms ‘outgrowers’ and ‘contract-farming’ are used interchangeably, as ActionAid has noted. This paper will use the term outgrowers, but when referencing other sources may refer to contract-farming schemes.

2.2. How can outgrower projects be categorised?

Outgrower projects can be categorised into a typology based on the level of the relationship between buyer and producer, as well as the number of additional services provided to the smallholder farmer. The typology below builds on previous efforts in this direction, in analysing and categorising a project based on the depth of the relationship between outgrowers and the contracting firm. It has been expanded to include other characteristics and the environments to which each model is ideally suited, and is illustrated with examples drawn from the pool of AECF grantees.

Figure 1: Typology of Commercial Outgrower Schemes

Typology of Commercial Outgrower Schemes ⁷					
	Informal	Intermediary	Multipartite	Centralised	Nucleus-estate
Definition	Informal arrangements on an annual or seasonal basis, or spot-trading between farmers and company/ traders, with no specification or requirements as to quantity and no credit or extension services provided.	Agricultural commodities pass through an intermediary organisation (e.g. local buyers, lead farmers, or farming groups) before going to commercial buyer or processor.	Outgrower project a partnership between a commercial buyer of the produce and one or more MFIs, NGOs, and/or input suppliers.	Company provides inputs and/or extension services and buys produce, usually subject to strict product quality requirements.	Company has a central farm and processing facilities, and supplements own crop production with supply from outgrowers located on smaller parcels of land surrounding this central farm.
Relationship with farmer	Beyond buying crops, little interaction between company and farmer. No provision of inputs or extension services, and contracts based on verbal agreements without any specific requirements.	As crops pass through intermediaries, there is limited direct interaction between the company and farmer. May be some input provision or extension services through local farming groups.	Farmer has a high degree of interaction with partner institutions providing input, extension services, and/or credit, but only limited interaction with the commercial buyer or processor.	High degree of interaction between company and farmer, both through provision of inputs and credit, and through extension services.	High degree of interaction, as there are normally strict product requirements to ensure outgrower output is at the same quality as the company's own production.
Crops and product characteristics	Crops which can be easily grown with minimal processing, or grow wild. Low quality variation and low perishability.	Staple food crops e.g. maize, potatoes, rice. Limited variation in quality.	Focus on high-value crops which don't require significant processing, such as fruit or vegetables.	Crops which require a high degree of processing (e.g. coffee, tea, cocoa, poultry), which have a high degree of perishability, are technically difficult, and display large variations in quality.	Crops which display economies of scale (favouring the larger farm model) e.g. bananas, sugarcane.
Company features	Small local firms who can process limited inputs.	Small local firms – firms can be smaller since interaction with farmers happen through external intermediaries.	Medium sized firms, who can build partnerships with other organisations but cannot handle full provision of inputs and credit themselves.	Large firms who can invest substantially into setting up outgrower schemes with a full provision of inputs – and can wait until crops are fully developed (especially the case with perennials).	Large firms who have their own agricultural production facilities.

Typology of Commercial Outgrower Schemes⁷

	Informal	Intermediary	Multipartite	Centralised	Nucleus-estate
Advantages	Very easy to set up and low operational costs.	Limited investment, and can stimulate the creation of farmer groups which can facilitate further agronomy training.	Risk is shared across institutions, and different institutions can develop specialist expertise in their particular area of operation.	High degree of control and frequent interaction with farm acts as an obstacle to side-selling, and ensures control over quality.	High level of control and company can easily provide inputs and extension services through central farm.
Disadvantages	No contract so limited security for outgrowers, and limited control of the production process.	Limited relationship between company and farmers.	Difficult coordination between different partner institutions, limited interaction with buyer can encourage side-selling.	Very high level of investment required.	High level of investment and geographic proximity limits flexibility with regards to outgrower selection.
AECF Example	B'Ayoba B'Ayoba is an AECF grantee operating in Zimbabwe. Local agricultural workers can collect wild Baobab fruit in remote rural areas and deposit them at B'Ayoba collection centres for an agreed price. There is no formal contract or set of requirements (beyond some quality checks), although collectors are registered.	Mount Kenya Gardens Mount Kenya Gardens operates two outgrower schemes: a centralised model growing green beans, and an intermediary model growing mangos, bananas and papayas. The latter business works through local farmer associations, who act as buyers at the intermediary stage.	Northern Farming Northern Farming works with maize outgrowers in Zimbabwe. During project implementation, they identified a need for weather insurance and so up with TAMI, another AECF grantee, to provide micro-insurance. Northern Farming also utilises a local NGO to provide extension services to outgrowers participating in the scheme.	New Horizons New Horizons runs a poultry outgrower scheme in Mozambique. They provide the initial capital equipment as well as a starter pack of broilers. Outgrowers are visited daily by a poultry technician, displaying the close relationship between farmers and company. Farmers are very closely monitored across a range of metrics, and good farmers are rewarded with more chickens. New Horizons buys the broilers from the outgrowers at a fixed prices.	Sunshine Agro Sunshine Agro grows and processes cocoa, chilli, and herbs in Uganda. They operate using a central farm supplemented with production from outgrowers, who they provide with inputs, training and finance. As their outgrower project has grown, the produce from their own farm has mainly been used as seedlings for new outgrowers.

2.3. What are the characteristics of successful outgrower projects?

A successful outgrower project can be defined by three characteristics: a profitable project for the company, an improvement on the baseline net household income for the outgrower, and sustainability. Previous studies have suggested that there are several common characteristics across successful outgrower projects.

- **Crop type:** Cash crops which require significant processing at scale or are highly perishable appear to be the most suitable to outgrower projects. This is most likely because these crops are normally more difficult to sell in local markets, and the risk of side-selling (when participating smallholder farmers sell crops to other buyers, in breach of contract to their outgrower company) is reduced. Tea, for example, is a successful outgrower crop as the scale of processing production required and difficulty in accessing the final market mean that side-selling is low. Cash crops which are difficult to grow are also associated with successful outgrower schemes, as smallholder farmers are reliant on the inputs, technology, and education required to grow them. While there are examples of successful outgrower schemes involving food staples, these tend to be less common.
- **Company size:** Successful outgrower projects also tend to be managed by large companies, who have the financial reserves to commit to building the long-term relationship between company and farmer that characterises successful outgrower projects. Large companies can also more easily move products up the value chain. This corresponds with another characteristic of successful outgrower programmes – they are more likely to supply supermarkets within urban centres in developing countries and markets within developed countries, as these markets are more easily accessed by large companies. Large companies are also often associated with strong vertical integration of their supply chain which creates a de facto monopoly, in turn reducing the risk of side selling.
- **Level of interaction:** Finally, successful outgrower projects also normally involve high levels of farmer-company interaction. A global review of large-scale outgrower projects from developing countries found only two out of the 28 deemed to be “successful” had a limited relationship between company and outgrower, with no extension services, credit, or input provision. Interestingly, the other 26 successes all involved extension services, possibly suggesting that education and training is the most important service smallholder farmers can receive through an outgrower scheme. However, a “deep” relationship involving the provision of a full package of inputs, credit and education can also imply greater cost

and risk exposure for the company, as if the scheme is not successful then the company stands to lose proportionally more.

Cash crops which require significant processing at scale or are highly perishable appear to be the most suitable to outgrower projects. This is most likely because these crops are normally more difficult to sell in local markets, and the risk of side-selling (when participating smallholder farmers sell crops to other buyers, in breach of contract to their outgrower company) is reduced.

2.4. What are the challenges facing outgrower projects?

- **Quality and yield issues:** A key challenge that outgrower projects face is farmers failing to deliver produce of the appropriate quality or quantity. This can occur for a range of reasons: poor training (or slow adoption of good agricultural practices by farmers), poorly structured incentives, fraudulent behaviour (including side-selling), and lack of access to other key inputs. While many of these issues may be caused by poor design or management of the scheme, the outcome is the same – farmers end up not producing enough to warrant the initial investment. Companies engaging in outgrower schemes may also have made large capital investments (such as in a processing plant), and inadequate supply can result in significant losses. For example, in the sugar industry the initial investment into the construction and machinery of a sugar mill entails high fixed cost. A reduction in supply can seriously and exponentially impact the viability of the business. Conversely, the swiftly decreasing marginal costs imply that the last tonne of cane milled is normally the most profitable, meaning that the gains from engaging with smallholders can be significant.

- **Side-selling:** A key challenge for outgrower projects is 'side-selling' – when smallholder farmers sell part of their crop to alternative buyers, rather than the contracting company. This is an issue for companies as they may have invested in inputs and training, yet do not receive the benefit of increased supply and may find it difficult to recoup the costs of inputs provided on credit from the smallholder farmers. For the smallholder, the incentive is to receive a higher local price for their crop than what they would have received through the contracting company. This is either because of short term price fluctuations, which allow local buyers to opportunistically offer higher prices than the contractually agreed price, or because the price they receive through the company takes into account the costs of the supplied inputs (something which is not always recognised by the outgrower). This incentive to side-sell can be especially strong in schemes focusing on staple crops, which are easier to sell on local markets or to consume within the household, and often do not require a significant amount of further processing.
- **Recruitment** is another challenge facing outgrower schemes. Farmers can often be wary of switching from traditional staples, particularly if new crops take a significant time to mature (for example cocoa, which can take over five years before producing beans). Furthermore, some outgrower projects can require significant initial investments from smallholder farmers as well as buyer companies. This can act as a further barrier to outgrower recruitment. Problems within recruitment can severely inhibit outgrower projects, which by their nature – requiring a high fixed cost initial investment – are only commercially viable at scale.

2.5. What are the potential advantages to smallholder farmers through participating in outgrower schemes?

Outgrower schemes have the potential to significantly increase smallholder income both through increasing yield and by increasing quality. Schemes can also insulate farmers from a variety of risks, including rogue buyers. The core mechanisms by which outgrower schemes increase household income and reduce risk are outlined below.

- **Access to non-local markets:** The primary advantage that smallholder farmers participating in outgrower projects receive is access to non-local markets. The company enables farmers to participate in higher-value markets (including export markets), which increases the range and value of crops that they are able to grow. Importantly, this advantage exists regardless of the type of relationship between farmer and company, even when neither inputs nor extension services are a component of the partnership. Moving from staple or subsistence crops to higher-value cash crops can have a transformative impact on the household income of smallholder farmers.
- **Access to high-quality inputs:** Outgrower schemes can also provide smallholder farmers with timely access to high-quality inputs, including seed, fertiliser, and capital equipment. These inputs are either supplied directly or on credit, which means that farmers with limited cash-flow are able to access inputs at critical periods. Better quality inputs can have a significant impact on farm productivity and yields, thereby raising household incomes. A reliable and regular supply of high quality inputs is critical. One study found that 99% of fertilisers in Uganda were less than 90% pure, whilst up to 40% of seeds are counterfeit.
- **Access to credit:** Outgrower schemes have also successfully worked as a mechanism through which credit can be supplied to smallholder farmers, with credit under contract farming arrangements often one of the major (if not only) sources of finance for smallholder farmers who otherwise lack collateral and access to formal financial markets. Since credit is tied to farm production, and there is a usually a guaranteed offtake agreement, interest rates are lower than other commercial microcredit providers and, theoretically, this enables farmers to build up a credit record which can then help them access alternative sources of financing. Some schemes have also started to extend other forms of financial services, including micro-insurance to cover weather or bad harvests, which provides additional income security and stability through mitigating risk.
- **Access to expertise:** As noted previously, studies suggest that most successful outgrower projects include some form of extension services i.e. agricultural training and education. Companies operating outgrower schemes have a clear incentive to train participating smallholder farmers and raise productivity, as doing so raises their yield from their existing outgrowers and reduces their marketing and transaction costs in building partnerships with new smallholders. For farmers, better training translates into increased agricultural productivity and higher incomes. An improved understanding of the agronomy can also help mitigate against crop failures and therefore improve income security.
- **Price stability:** Price stability is another key benefit for smallholder farmers participating in outgrower schemes. Prior surveys have suggested that most outgrower schemes operate using ex-ante fixed prices, which guarantees farmers a price for their crop regardless of short-term fluctuations in the market price. This stability helps to insulate farmers from downside price risk and helps to provide a degree of guarantee and predictability with regards to income. This price can be supplemented by a bonus payment which is calculated on the final average

market price for the year or, in the case of crops like coffee, on the final price of that consignment.

2.6. What are the potential disadvantages to smallholder farmers through participating in outgrower schemes?

Despite the many advantages of outgrower schemes outlined above, some critics suggest that badly designed outgrower schemes can leave smallholder farmers worse off. ActionAid, for instance, argue that some schemes produce an unequal distribution of risk between farmer and company, with smallholder farmers carrying almost all of the risk yet also providing labour and land. Participating smallholders can end up with a high degree of capital exposure to a company through provision of inputs on credit, and no safety net or insurance if the harvest fails. Moving to new crops which are more difficult to produce, or away from annual crops to perennials, also involves a degree of risk which can effectively end up being borne by the smallholder. Another risk of outgrower schemes is that they can shift smallholders from producing traditional staples to growing cash crops, and in doing so can imperil food security. Although cash crops can offer higher incomes, in times of famine or drought they cannot be relied upon by smallholder farmers as a source of household subsistence. This can be mitigated against by rotating cash crops with staples, which, as NextBillion has noted, has the additional advantage of improving soil quality. However, that isn't possible for many common tree crop outgrower schemes such as coffee or cocoa.

Finally, outgrower schemes can lead to outgrowers becoming too dependent on the company for their source of livelihood, if there are no alternative buyers for their produce. If the scheme fails, then smallholders have no other market to sell their produce to. This entails a considerable degree of risk, as if the outgrower project does fail they are left producing a crop from which they cannot earn income.

2.7. Who is excluded from outgrower schemes?

There is considerable evidence that suggests outgrower schemes work with the 'active poor' and so sometimes do not include the very poorest in rural communities – at least not initially. As a DFID study on outgrowers noted, "small-holder participants in contracting schemes are from the wealthiest strata of rural communities", a finding supported by other research. One reason for this is clear; most outgrower schemes require smallholders to have

Another risk of outgrower schemes is that they can shift smallholders from producing traditional staples to growing cash crops, and in doing so can imperil food security. Although cash crops can offer higher incomes, in times of famine or drought they cannot be relied upon by smallholder farmers as a source of household subsistence.

both a minimum amount of land and the right to farm this land. This often acts as a prohibitive restriction for the poorest members of rural society. Other studies looking at outgrower schemes in sub-Saharan Africa have found that education and asset endowments act as entry barriers to smallholder farmers, even for those with land. For contracting firms, selecting farmers with large amounts of land, capital equipment, and agronomy training reduces risk.

The evidence from other projects suggests that there is also a gender imbalance in outgrower schemes. A World Bank study found "virtually all outgrowers were men"; on the 24 projects they surveyed, women made up only 1.5% of the participants. Other studies have found that even when women provide most of the labour, contracts are still awarded largely to male household heads. This disparity could be because of the need to secure community buy-in, which normally entails working through traditional patriarchal structures which may end up effectively excluding women from ownership of the outgrower relationship, even though they may still be involved. In many communities, men are also the holders of land rights (whether inherited or accessed through traditional structures), which are necessary for participating in an outgrower scheme. Since "outgrower" is a gender-neutral term, such a disparity is usually not readily visible and is often absent from analysis as a result.

3. Quantitatively assessing AECF-funded outgrower projects

Our point of departure in examining AECF-funded outgrower projects was to take a comprehensive, portfolio-based analysis. This methodology helped us answer the following series of questions:

- What different types of outgrower models are funded by the AECF and in what ways do they generate benefit for smallholder farm households, including the rural poor ?
- Which type of outgrower model is most successful from the perspective of smallholders?
- Which type of outgrower model is most successful from the perspective of the agribusiness?
- Are there other factors (i.e. specific social, economic and geographical contexts, enabling environments, agribusiness sectors or crops) which are key determinants of success?

In addition to basic project information, the AECF regularly collects data on all funded projects through progress reports, including information on progress against development impact and implementation targets. Using this data, outgrower projects from the portfolio were identified and then categorised based on the typology developed above ('informal', 'intermediary', 'multipartite', 'centralised', and 'nucleus'), as well as a categorisation along other key characteristics. This required an analysis of the original business plan for each grantee, and an evaluation of the most recent grantee progress reports and site visit reports to confirm that the business model had not evolved sufficiently to warrant a change in typology.

A similar approach was used to quantitatively assess the project's development impact, calculated by estimating both the number of direct beneficiary households from a project and the average net benefit accruing to each household. To understand whether outgrower projects were successful from a commercial perspective, revenue and profitability figures were also taken from project reports. Given that this data relies partially on the accuracy of self-reporting, and given that figures are sometimes revised during implementation as the project matures (which makes comparison with historical figures difficult), the dataset created is by no means perfect. It does, however, allow for the identification of broad patterns and trends within the portfolio.

A key challenge was the inability to robustly analyse the differential gender impact of funded projects. The data collected by the AECF on beneficiaries is at the household level, and therefore is not gender-disaggregated. There

is thus no portfolio-wide data revealing the breakdown of principal outgrower by gender, making drawing meaningful conclusions as to the gender perspective within outgrower schemes difficult. In the analysis of the project documentation, projects were also assessed on whether they had an explicit gender targeting aspect. Only 7 projects, out of the 51 analysed, had a strategy for making their outgrower project accessible to women. This could suggest that women were disadvantaged in accessing the majority of AECF-funded outgrower schemes, although at a portfolio level that it is difficult to fully verify without gender-disaggregated data.

3.1. Overview of portfolio

To date, the AECF has committed US\$33m to 51 outgrower projects, which were backed with a further US\$69m of matched funding from implementing businesses and third-parties. These projects were funded across six different AECF funding windows, starting in 2008 and with the most recent projects still at the pre-implementation stage. Geographically, projects are dispersed across 14 countries in Sub-Saharan Africa, driven by the focus of the AECF windows. There is a particular geographic focus in Tanzania, with more than a third of the projects funded through the Tanzanian-specific window.

Figure 2: Countries with AECF-funded outgrower projects



Figure 3: AECF Outgrower Portfolio Summary

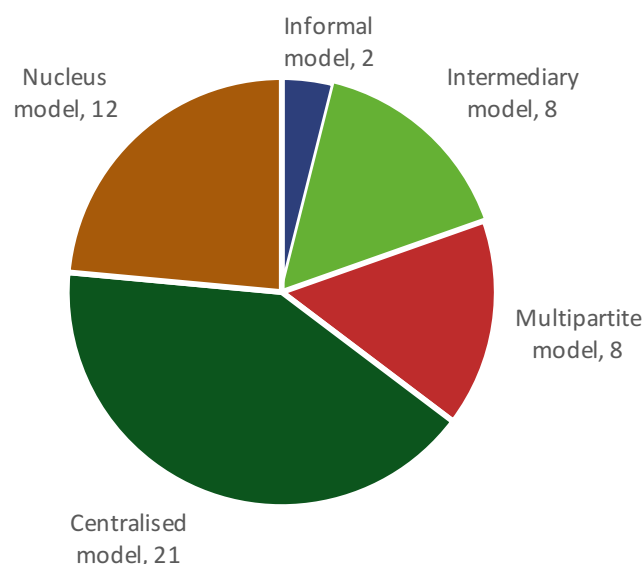
Summary of AECF-funded outgrower projects	
Number of projects	51
No. of funding windows	6
Countries	14
Average AECF funding per project (US\$)	654,100
Average matched funding per project (US\$)	1,353,000
Average leverage ratio of AECF to matched funding	2.07
Total project funding (US\$)	2,007,100
Average no. households impacted by project	2,500
Average net benefit per household in 2015(US\$)	200
Average project development impact in 2015 (USD\$)	420,700
Average predicted development impact per year at end of project (USD\$)	3,021,400

To date, the AECF's portfolio of outgrower projects has impacted a total of 122,700 households, generating a cumulative net benefit of US\$52m.

3.2. Project design stage: what type of outgrower schemes does the AECF fund?

Breaking the outgrower portfolio down by typology revealed that the AECF has supported a relatively diverse range of outgrower models, with projects from all 5 categories represented. The largest proportion (41%) are centralised outgrower models, followed by nucleus or estate schemes (24%). Only two AECF-funded projects were informal models, which is perhaps unsurprising given that the informal, small-scale nature of these schemes likely means that many potential applicants would not have the capacity to competitively participate in the AECF selection process which requires a robust business case and concrete outcomes.

Figure 4: Types of AECF-funded outgrower projects



The table below shows the different forms of support offered within outgrower schemes, broken down by each type of outgrower model. As expected from previous studies, almost all (90%) of the AECF outgrower portfolio offered extension services of some kind. While this figure is very high, the type of extension services can vary substantially: from individual on-farm advice and training, to generic advice or information provision. The vast majority (80%) of schemes also provided smallholders with farming inputs. Only one in five projects offered certification services (such as FairTrade or organic certification), which, given that the expense and effort of certification is only feasible with high-value export crops, is perhaps unsurprising.

When looking at the types of support offered across the various outgrower schemes there is less variation than might be predicted, which suggests that the key difference is not so much whether different forms of support are offered, but how. Multipartite and nucleus models both offer credit support and input supply services more frequently than centralised models. This is possibly because outsourcing forms of outreach under a multipartite model enables outgrower schemes to more easily offer a wider range of services, while in the nucleus model the required inputs and expertise are already present as the processor is also producing output themselves. There was no discernible pattern in the provision of certification services; the key determinant of whether outgrower schemes offered certification services is not the type of outgrower model used, but rather the type of crop being produced.

Figure 5: Services offered by AECF-funded Outgrower projects

Type of outgrower scheme	Percentage offering Credit support	Percentage offering Extension service	Percentage offering Input supply	Percentage offering Certification services
Informal model	0%	50%	50%	0%
Intermediary model	38%	100%	75%	25%
Multipartite model	63%	100%	100%	0%
Centralised model	52%	81%	67%	29%
Nucleus model	75%	100%	100%	25%
Outgrower portfolio	55%	90%	80%	22%

In order to examine the conditions under which these services were provided, we looked at the contractual relationship between the project and the outgrowers. This data was drawn from an analysis of project documentation which did not always explicitly state whether contracts existed, and the ways in which they were structured. This could explain some of the surprising results seen here. In particular, the number of projects (11, or 26% of those for which data exists) which operate without contracts or formal registration of outgrowers is higher than expected – especially since none of these are informal models.

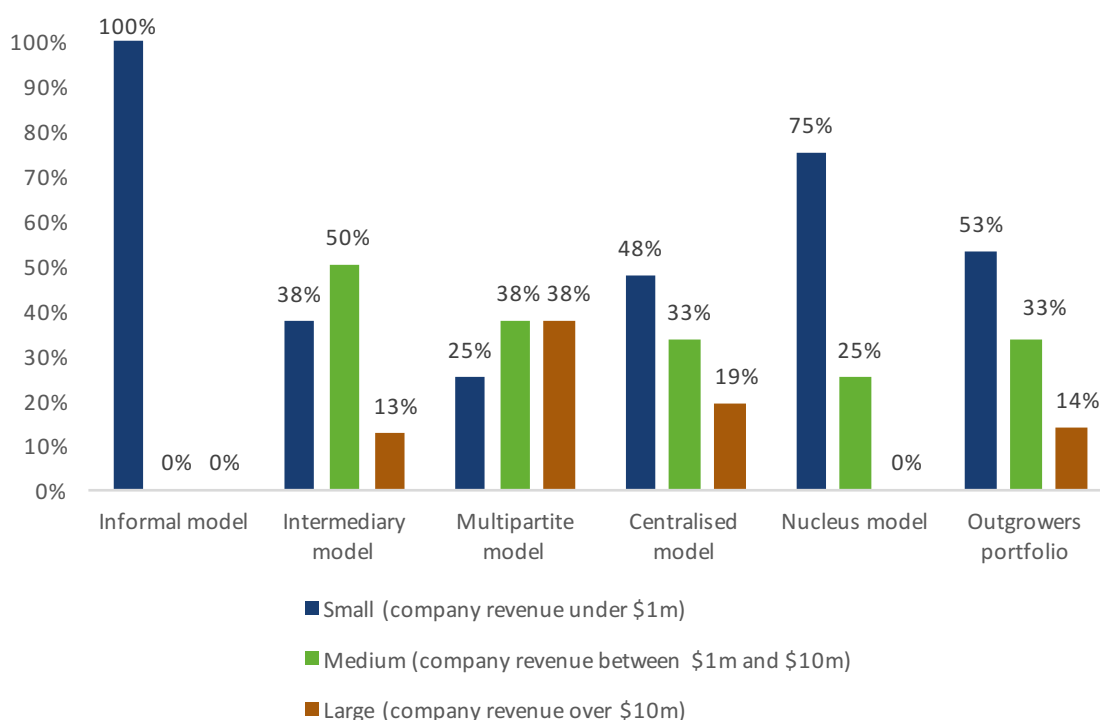
Given that 9 of the 11 are operating either as centralised or nucleus models which tend to have a greater degree of interaction between farmer and firm, it could be that these projects relied upon more informal agreements based on the strength of this relationship. The focus on cash crops by nearly 70% of these models also suggests that opportunities for side-selling may have been limited, strengthening the dependency relationship. It was also surprising that the percentage of agreements specifying exclusivity was so low in centralised models. One might expect that in a centralised model providing inputs, training, and resources exclusivity may be a way to protect against side-selling. This is however only indicative, as some projects may incorporate exclusivity clauses without mentioning this explicitly in their project documentation.

Figure 6: Types of contractual agreements in AECF-funded outgrower projects

Typology	Contract Type			Contract Feature	
	No contract	Registration	Written	% of each type of outgrower scheme offering Exclusivity	% of each type of outgrower scheme offering a fixed and specified price
Informal model	0	1	1	50%	50%
Intermediary model	2	1	4	63%	50%
Multipartite model	0	2	5	25%	25%
Centralised model	5	0	11	38%	43%
Nucleus model	4	0	7	67%	50%
Outgrowers portfolio	11	4	28	47%	43%

Most outgrower projects are operated by small grantees, with only 14% being run by large companies with revenue over USD\$10m. This is perhaps not surprising given that the AECF tends to focus on smaller businesses, many of whom also have the flexibility to undertake innovative projects of the type encouraged by the AECF. As expected, both informal models were run by small companies, which has revenues of under USD\$1m. Nucleus models, which generally involve incorporating smallholder farmers located around a central farm, also tended to be run by small companies. This suggests that these largely consist of a company with one large farm, and not a big agricultural producer with multiple farms operating at scale.

Figure 7: Variation in company size by type of outgrower project

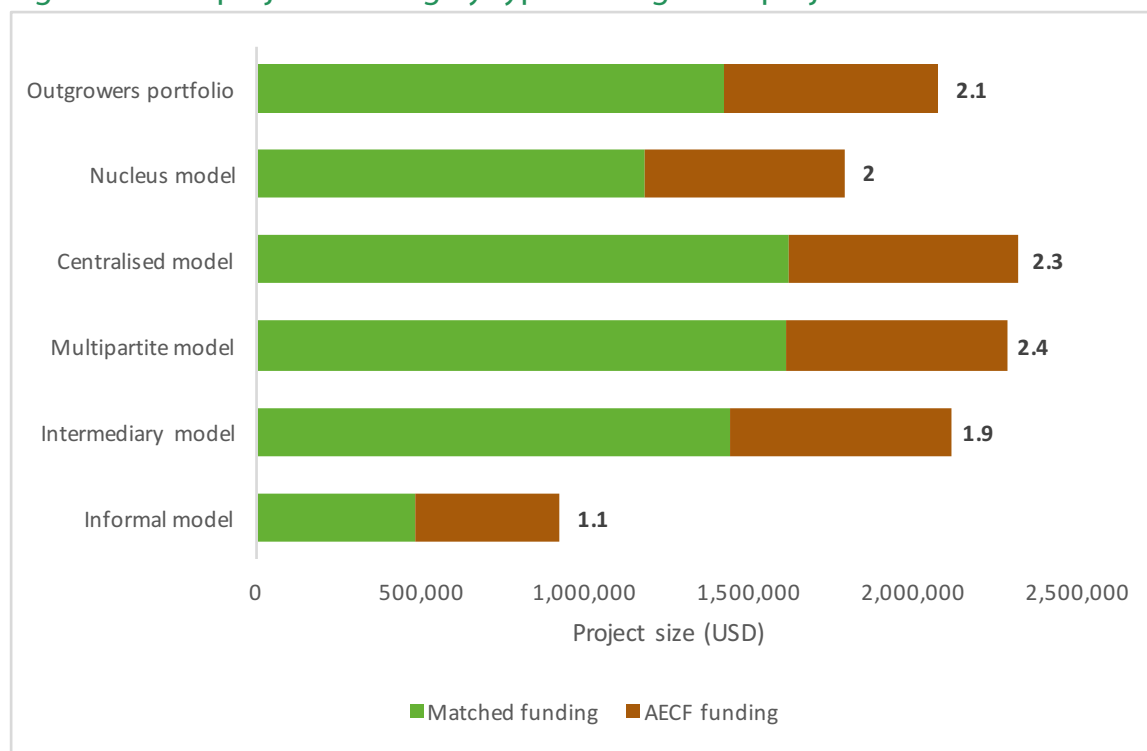


Outgrower schemes funded by the AECF are predicted to reach an average of nearly 7,000 households, and generate just over \$400 of net benefit annually for each of these households by the end of project implementation.

There was also some variation in the size of the outgrower scheme, as measured by the amount of project funding. Informal models had least funding, with an average AECF funding commitment of just under USD\$450,000. Centralised models were the largest overall with an average total project size (including both AECF and matched funding) of USD\$2.3m. AECF funding in informal outgrower schemes was also significantly less leveraged, suggesting that informal schemes had less capacity to raise matching funds from other sources, including internally. This could also be due to the criteria of the AECF, which requires larger companies to demonstrate greater leverage in order to ensure additionality. Multipartite models had the highest leverage at 2.4, suggesting that bringing several different stakeholders together may also crowd in additional funding and resources than in schemes with a single player. As the

graph above indicates, multipartite models were also more likely to involve large companies. This could indicate that large companies were more successful in attracting and providing matching funds, as one might expect.

Figure 8: Total project funding by type of outgrower project



Outgrower schemes funded by the AECF are predicted to reach an average of nearly 7,000 households, and generate just over \$400 of net benefit annually for each of these households by the end of project implementation. Across the typologies there is however significant variation. Nucleus models, on average, aim to reach fewer farmers than any other type of outgrower scheme but aim to have the greatest impact on net benefit. This reflects the structure of nucleus outgrower schemes, which work more intensively with a smaller number of farmers. On the other hand, intermediary, multipartite and centralised models aim to work with more farmers, but predict that they will generate less benefit per household. As might be expected, intermediary models had a slightly lower predicted net benefit than either multipartite or centralised schemes, perhaps reflecting the greater distance between smallholder farmer and outgrower company or the fact that intermediary models tend not to offer credit support.

Removing outliers from the analysis

These tables do not reflect two AECF projects which we removed from the overall analysis: Tanga Fresh and Mountain Lion Agriculture. These projects included predicted development numbers which were considerably out of line with the rest of the portfolio, and changed the analysis entirely. In the case of Mountain Lion Agriculture, a nucleus outgrower model operating in Sierra Leone, the scheme predicted that household beneficiaries would be receiving a net benefit of USD\$9,636 by the end of the project. Including Mountain Lion Agriculture therefore raises the average predicted household benefit for nucleus model schemes from \$591 to \$1,345, showing how a single outlier can significantly distort a portfolio-based approach. Similarly, Tanga Fresh, a dairy outgrower scheme operating in Tanzania, predicts that household income for their estimated 8,000 beneficiaries would increase by \$2900. The net benefit increase per household is the second largest in the portfolio, after Mountain Lion, whilst the total predicted development impact is the greatest. These projects appear not to be typical for AECF outgrower schemes because their focus is on a wealthier segment of the population. Mountain Lion Agriculture, for example, predicts that farmers will have an average of 33 acres under cultivation by the end of the project, and Tanga Fresh aims to work with “medium scale” farmers that own 10-20 cows, a capital investment beyond the reach of a typical smallholder farmer. The targeted famers are therefore at a larger scale than typical smallholder farmers (although definitions of smallholder farmers vary, a common yardstick used by the FAO is farmers with less than 5 acres).

Figure 9: Predicted Development Impact Figures* (without outliers)

Type of outgrower scheme	Average of predicted number of households at end of project	Average of predicted net benefit per household per year at end of project (US\$)	Average predicted total net benefit per project (US\$)
Informal model	3,198	283	787,458
Intermediary model	7,795	275	1,212,768
Multipartite model	8,033	465	3,568,396
Centralised model	9,168	315	2,936,556
Nucleus model	2,980	591	1,089,428
Outgrowers portfolio	6,883	410	2,265,584

How the AECF measures development impact

The total development impact, in US\$ terms, of AECF funded agribusiness projects is composed of the total net benefit to smallholder households engaged with the project, and the total wage bill of direct employees. The total net benefit is calculated by quantifying the number of households directly benefitting from the project and multiplying it by the average net benefit per household. The average net benefit refers to the additional income or cost saving per year the smallholder household receives from engaging with the AECF project, less any additional (e.g. increased spend on inputs) or opportunity costs (e.g. income forgone from switching crops) for the beneficiary through participation in the project. The net benefit per household is therefore a measure of the increased productivity of agricultural self-employment. The total wage bill is simply the total annual wage bill of all the additional jobs created in the AECF funded business. Indirect beneficiaries, including suppliers upstream and downstream the value chain, are not included. This paper will mainly focus on total net benefit, but will also assess projects by total development impact. It is important to note that both these figures refer to annual metrics: total net benefit is an indicator of the extra income being delivered as a result of a project each year, rather than on a cumulative basis.

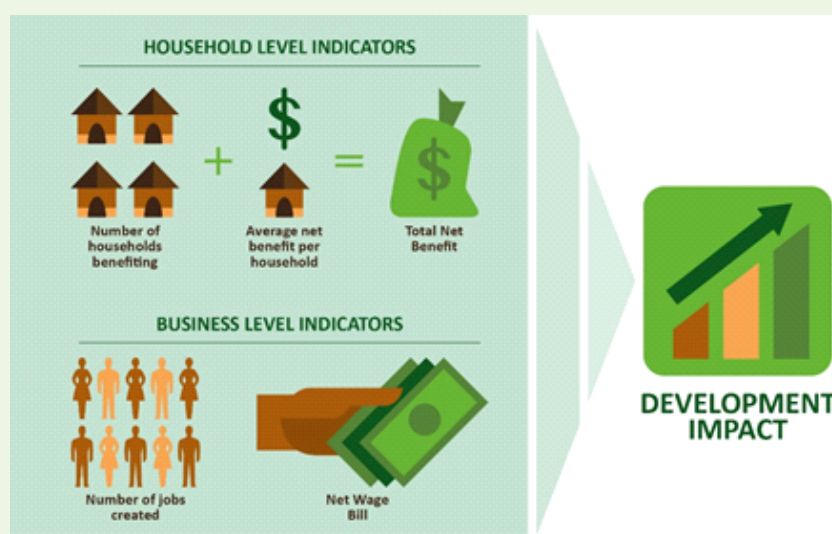


Figure 11 shows the ratio between predicted development impact and AECF funding, in order to assess where AECF funding is being most effectively used. Across all outgrower projects, \$1 of AECF funding generated a predicted average of \$4.50 of net benefit per year. Multipartite models had the greatest predicted development impact to AECF funding. Informal models had the lowest development impact to AECF funding ratio, generating \$1.80 of predicted total net benefit per year for every \$1 of AECF funding.

Figure 11: Predicted net benefit and AECF funding* (without outliers)

Typology	Average predicted total net benefit per year at end of project	Average Total AECF Funding	\$ of predicted total net benefit per year per \$ of AECF funding
Informal model	787,458	445,000	1.8
Intermediary model	1,212,768	672,000	2.0
Multipartite model	3,568,396	675,943	9.5
Centralised model	2,936,556	694,534	4.0
Nucleus model	1,089,428	608,865	3.1
Outgrowers portfolio	2,265,584	653,990	4.5

3.3. Project performance stage

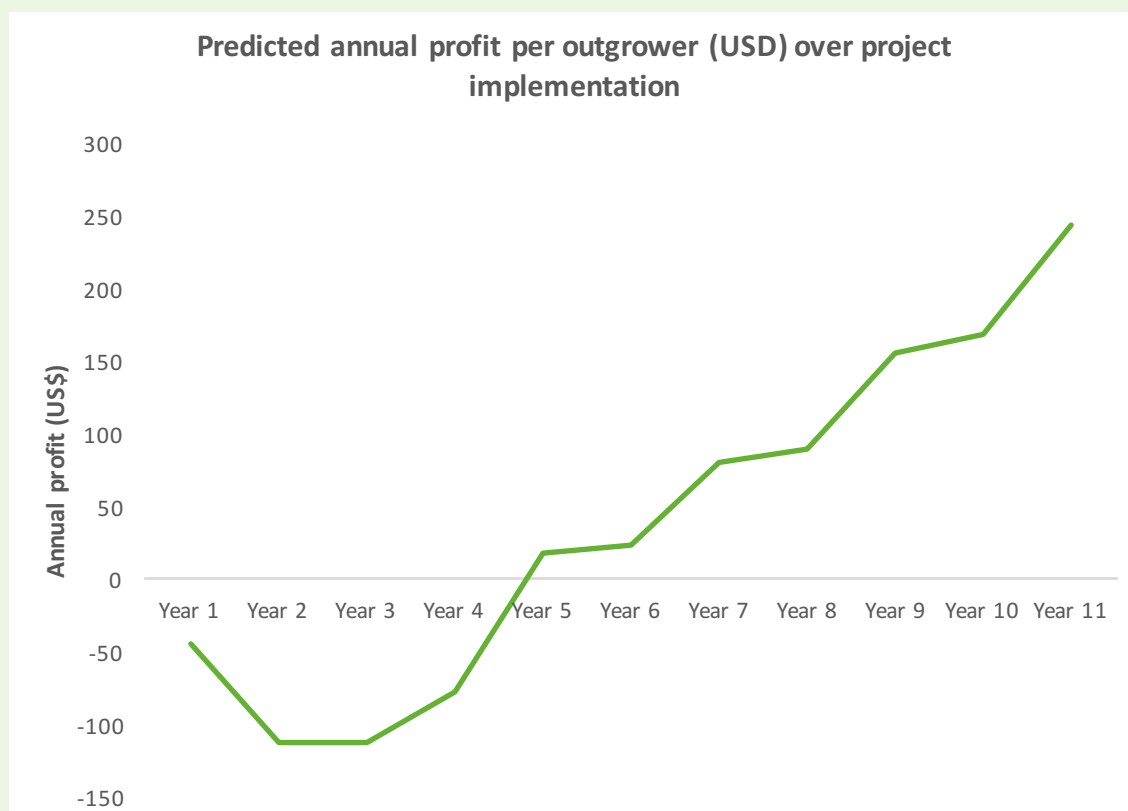
This section analyses the actual performance of AECF funded outgrower schemes, both from the perspective of smallholders and businesses, in order to identify whether there some types of outgrower schemes or contexts in which they operate which led to success. The challenge however is in defining success within the portfolio, given that the age of projects averages five years but, depending on the type of outgrower scheme, ranges between an average of four to seven years. This means that projects are at very different stages of implementation: multipartite models, for instance, are on average two and a half years further into implementation than nucleus models, making a straightforward comparison challenging.

Furthermore, some models may take longer to implement than others. For example, projects which grow crops which take several years to reach maturity, such as avocados or cocoa, take longer to start showing progress in key monitoring indicators. This is exacerbated by the fact that these high-value crops are frequently found in centralised and nucleus outgrower schemes, meaning that these models perform poorly when looking at financial metrics, simply because the benefits are only realised several years into implementation. Finally, many projects have occasionally experienced significant delays between project agreement and release of funds, making it difficult to ascertain how long the project has been in active implementation.

In order to address some of these issues actual performance was evaluated against annual targets set during the application and contracting phase, where companies were asked to predict their progress against a number of key development indicators such as household beneficiaries and net household benefit.

Why project age matters: Africado

Africado is an AECF funded nucleus outgrower model, producing avocados in Northern Tanzania. Prior to Africado's investment, avocados were not grown in this region. Farmers incur substantial costs in starting to grow avocados, both in terms of initial investment costs and in terms of income foregone from other farming opportunities. Coupled with the fact that avocados take several years to reach maturity, this means that outgrowers will not start profiting from the project until several years into implementation. Using smallholder profit to assess the success of the scheme is therefore not a useful metric in the first years of implementation. The graph below shows the predicted annual profit per outgrower (minus investment and opportunity costs) for Africado.



3.4. Which models have the greatest development impact?

Partly as a result of delays in implementation, many projects' development impact are behind their projections. Nonetheless, some interesting trends indicate which types of outgrower models have been more successful.

Intermediary models have been successful in terms of outreach, with the average project reaching 80% of their target number of households. This result is perhaps not surprising – intermediary outgrower schemes work with pre-existing agricultural cooperatives and farmer groups, and building on pre-existing distribution networks should enable greater outreach. Centralised models have been the most successful in delivering benefits to farmers, and have on average actually exceeded the targeted net benefit per household. These two models have been the most successful when judged by the percentage of development impact versus target, with 40% and 44% respectively.

In comparison, multipartite models are operating

considerably below expectations, and have achieved just 7% of the development impact expected of them at this stage. Their failure appears to stem not from outreach, but rather from actually delivering benefits to smallholder farmers – net benefit was only 23% of what was predicted. This finding at the portfolio level will need to be investigated further using case studies, but one early conclusion could be that coordinating between different companies to deliver a full bundle of services to smallholder farmers is not successful.

When assessing the performance of the portfolio to date, a similar pattern emerges. While keeping in mind that these projects began implementation at different times, intermediary models thus far account for the most households reached across the outgrower portfolio, followed by centralised models. Nucleus models are generating the most benefit per household despite their poor performance against their own targets. Overall however, centralised and intermediary models have generated the most net benefit, with centralised models within the portfolio having generated on average nearly \$600k worth of net benefit for beneficiaries.

Figure 14: Total development impact of AECF funded outgrower projects (including formal job creation, excluding projects aged 3 years and under)

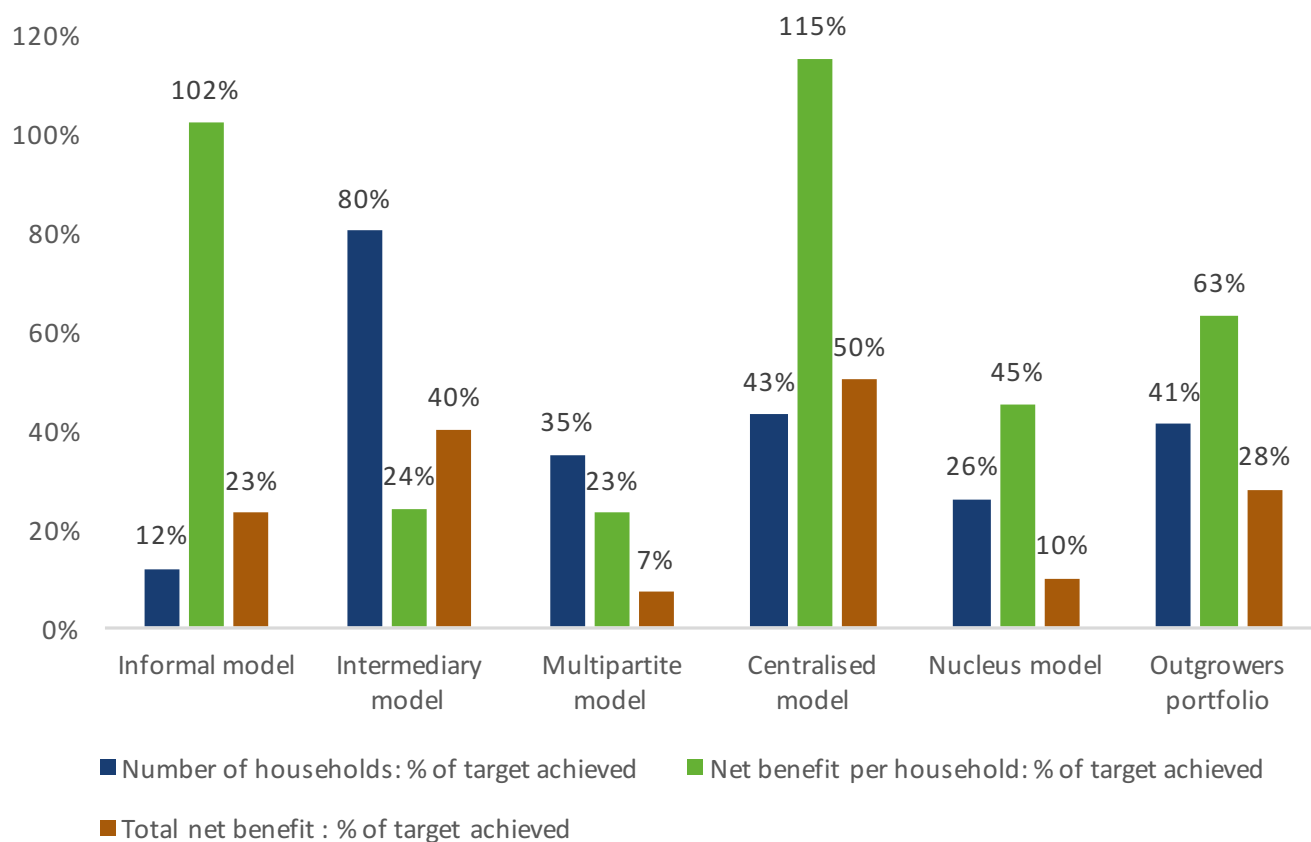


Figure 13: Development impact of AECF funded outgrower schemes to date (excluding projects aged 3 years and under)

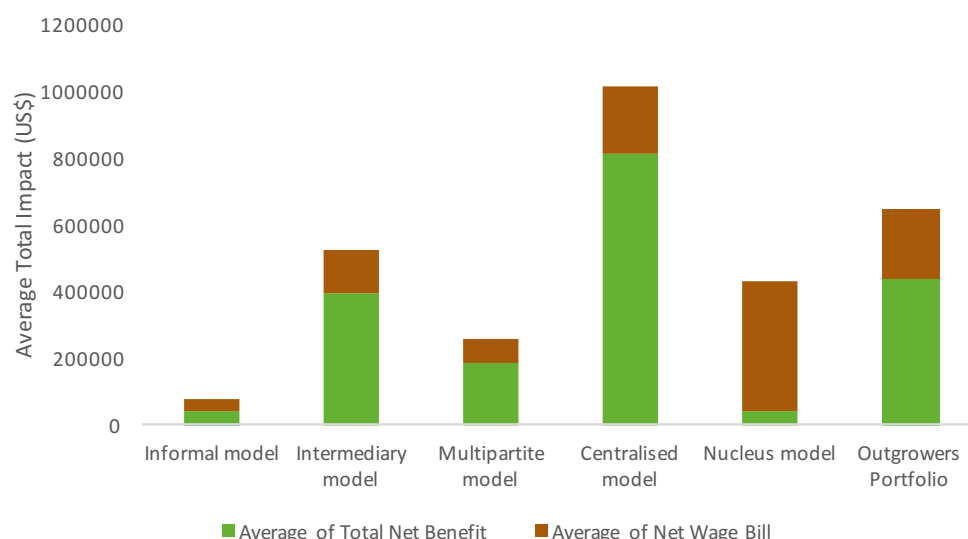
Type of outgrower scheme	Average Number of households per project to date	Average net benefit per household (average, to date)	Total net benefit achieved to date (average)
Informal model	329	74	37,793
Intermediary model	5,282	93	443,477
Multipartite model	1,144	46	203,043
Centralised model	2,344	156	592,616
Nucleus model	421	246	28,799
Outgrowers portfolio	2085	147	353692

3.4. Which models have the greatest development impact?

The AECF's calculation of total development impact also includes the wage-bill of all jobs created within the business. Comparing total development impact and AECF spending substantially changes the picture as some project typologies clearly have greater in-house job creation potential. In particular, nucleus models have very substantial wage bills compared to total net benefit. This is perhaps not surprising, for two reasons. Firstly, as previously mentioned, nucleus models often involve products which are high-value and require extensive supply chains and extension services. For example, two of the most successful nucleus outgrower models are poultry companies. The companies sell smallholders day-old-chicks, medicine, and specialised food packs. In one case, smallholders are visited daily by a poultry technician to monitor progress. This level of specialisation and close engagement with smallholders creates more formal jobs within the project.

Secondly, nucleus outgrower schemes may involve crops which take longer to mature, such as avocados. One interpretation of the numbers below is that although projects are being fully implemented, as suggested by the high net wage bill, projects have not matured enough to start fully delivering total net benefit to the end beneficiary. This point is reinforced by examining the net new jobs created by type of outgrower scheme. To date, nucleus models have created considerably more jobs than average. Multipartite projects appear to create very few jobs, which is partly explained by the fact that this figure only relates to jobs created within the AECF grantee. Since multipartite projects involve partnering with other institutions, it could be that there is significant job creation which is not captured below.

Figure 14: Total development impact of AECF funded outgrower projects (including formal job creation, excluding projects aged 3 years and under)



3.5. Which model worked best for companies?

The commercial viability of outgrower models is key to their long term sustainability, particularly in the absence of AECF support. When looking at commercial performance, projects aged three years or younger were excluded, on the basis that most projects would reasonably expect to make a loss during that time as a result of start-up costs. In general, AECF projects might reasonably be expected to be less profitable during implementation (more so than a normal commercial undertaking), given that the AECF is specifically designed to support more innovative and risky ventures and so has longer time horizons in which it expects to see a commercial return.

Across the portfolio however, projects seem to be doing well with an average annual profit of just over US\$150k per annum and a profit margin of 5%. When broken down by type of outgrower scheme, however, there is significant variation in the financial performance of companies. This analysis is however challenging, due to the varying ages of projects (with some types of schemes being, on average, older and thus more developed than others), the fact that some models take longer to realise commercial benefits, and the presence of several outliers.

Figure 15: Commercial performance of AECF funded outgrower projects (projects 3 years and under excluded)

Type of outgrower scheme	Average of predicted number of households at end of project	Average of predicted net benefit per household per year at end of project (US\$)	Average predicted total net benefit per project (US\$)
Informal model	-16,110	178,390	-9%
Intermediary model	85,466	2,845,631	3%
Multipartite model	-66,949	4,659,984	-1%
Centralised model	248,580	3,204,908	8%
Nucleus model	201,445	2,792,921	7%
Outgrowers portfolio	151,082	3,075,986	5%

However, when looking at the raw data it is clear that multipartite and informal models made a loss overall. For the former, this is perhaps particularly worrying, since multipartite models are, on average, older than the rest of the portfolio. That greater development is reflected in their high average revenue, but not in their profitability. That might suggest that the problem is on the cost rather than the revenue side. Centralised models and nucleus models clearly are performing best.

Another problem with looking at averages is that numbers can be distorted by outliers. To solve that problem, projects were categorised based on their profitability. This breakdown does not change the underlying narrative - multipartite models struggled, with 60% making substantial losses. Centralised models perform best, followed by nucleus models.

Figure 16: Commercial performance of AECF funded outgrower schemes categorised by profitability (projects 3 years and under excluded)²⁷

Type of outgrower scheme	Average of predicted number of households at end of project	Average of predicted net benefit per household per year at end of project (US\$)	Average predicted total net benefit per project (US\$)
Informal model	-16,110	178,390	-9%
Intermediary model	85,466	2,845,631	3%
Multipartite model	-66,949	4,659,984	-1%
Centralised model	248,580	3,204,908	8%
Nucleus model	201,445	2,792,921	7%
Outgrowers portfolio	151,082	3,075,986	5%



3.6. Project challenges

In order to develop an understanding of some of the challenges faced by outgrower schemes, projects were also assessed for evidence of challenges across four categories: side-selling, recruitment, exogenous shocks, and quality and yield.

Across the portfolio, nearly half of projects experienced issues with side selling, and 38% had challenges with the

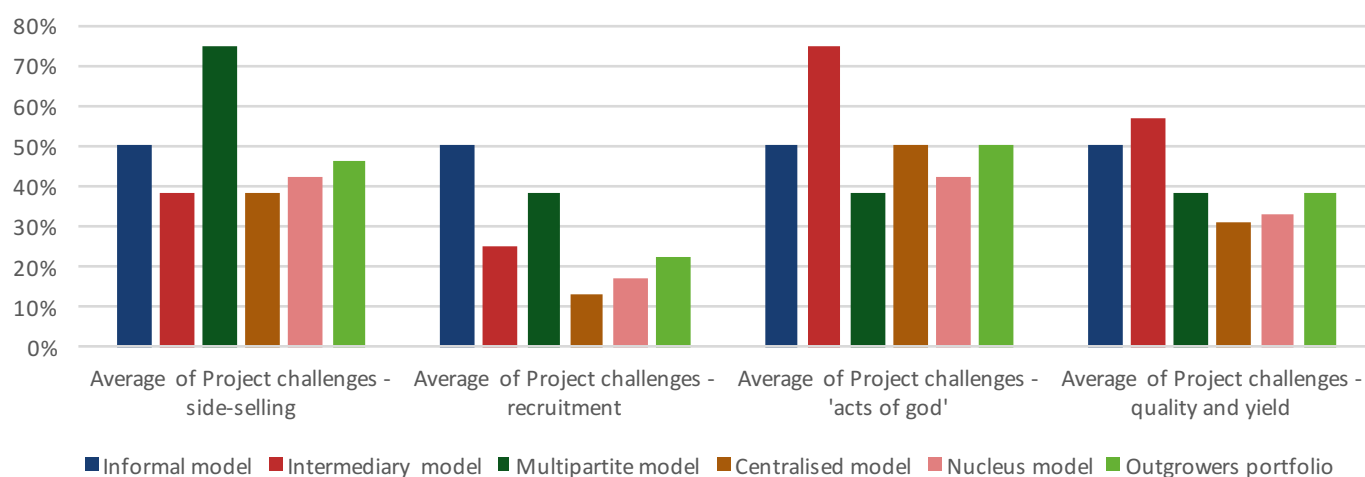
quality and yield of produce. Half of all outgrower projects were affected by exogenous shocks, which were largely the drought in Southern Africa and the Ebola crisis in West Africa. When looking at challenges by type of outgrower scheme, centralised and nucleus models appear to have had the fewest problems, while multipartite models had a particular problem with side-selling. This result is perhaps not that surprising, given that multipartite models do not involve a close relationship between the buying firm and the smallholder farmer. Only six projects out of the total of 51 did not experience any challenges.

Defining project challenges

When analysing project progress through grantee reports and AECF site visit reports, it became clear that outgrower projects faced similar challenges. Four common challenges were identified, and projects were assessed as to whether these had cropped up as significant problems in implementation.

Challenge	Explanation
Side-selling	Side-selling is when outgrowers sell their produce to other buyers, in breach of an agreement or understanding with the agribusiness. This is particularly in issue if inputs are supplied on credit, or if there is a deep local market for the product with many alternative buyers.
Recruitment	The challenge of recruitment is signing up enough smallholder farmers to make a project commercially sustainable. Projects particularly appeared to struggle with recruitment when the scheme involved the introduction of a new crop into the region.
Quality and yield	Projects were coded as having a problem with quality or yield if project reports consistently described outgrower farmers not producing enough, or if the crop was below expected quality standards.
Exogenous shocks	This challenge was used to note when projects faced an exogenous and unexpected shock which disrupted implementation – such as the Ebola outbreak in West Africa.

Figure 17: Project challenges by types of outgrower model



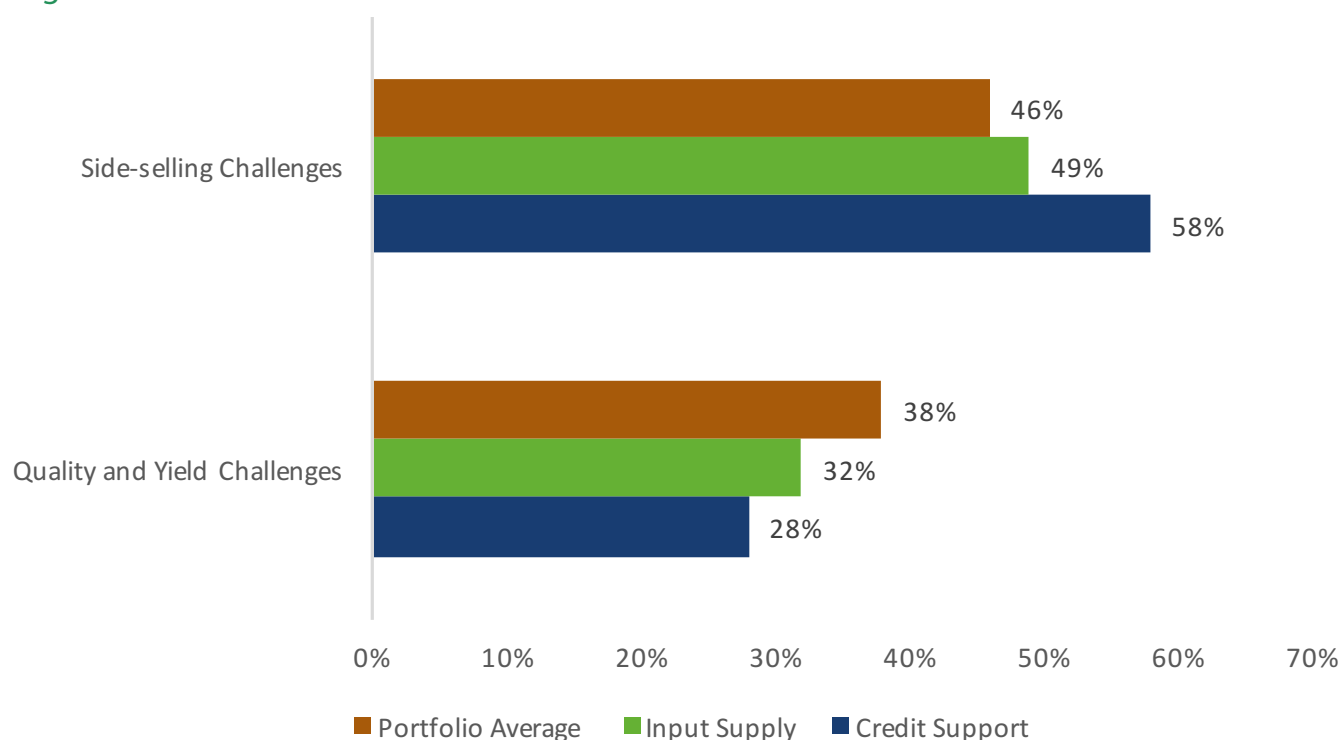
There also appeared to be a relationship between commercial performance and project challenges. Projects experiencing major losses were more likely to experience difficulties recruiting outgrowers, and were more likely to have been affected by exogenous events. These two results suggest that poor commercial performance is the result of both project design and implementation and random events. It also suggests that the core problem for struggling companies is recruiting enough smallholders to establish commercial viability, rather than side-selling or product issues. A significant proportion (71%) of projects who have average commercial performance have experienced issues with the quality and yield of the produce produced by smallholders. This suggests that they may be battling to implement extension and training services to farmers (since recruitment does not seem to be a particular issue). Should they be able to improve on this specific component of the scheme, then there is a good chance that they will start to see positive commercial results.

Figure 18: Commercial performance and project challenge (projects 3 years and under excluded)

Commercial success	Project challenges			
	Side-selling	Recruitment	Exogenous Shocks	Quality and yield
Positive profit	50%	13%	41%	25%
Almost break even	43%	29%	57%	71%
Major loss	50%	33%	67%	45%
Outgrowers portfolio	49%	23%	53%	41%

Comparing forms of outreach and project challenges also revealed some important relationships. Companies offering credit support and input supply experienced less of a problem with quality and yield than those that do not (and lower than the average across the portfolio), but on average experienced more problems with side-selling. This appeared logical – smallholders with access to credit may have been able to invest in productivity-boosting inputs, helping to maintain quality and yield. However, since some outgrower schemes lower purchasing prices to compensate for providing these services, there is an incentive to sell produce to other buyers at a higher price (and without having to repay the credit).

Figure 19: Relationship between provision of credit Support, inputs and challenges faced by outgrower schemes



3.7. Key Portfolio Analysis Themes

3.7.1. The AECF has supported a wide range of outgrower models

The AECF funds a wide range of outgrower models, with considerable representation in four of the five categories defined in the typology. The most common type is the centralised model, which make up 21 of the 51 projects (or 41%) in the portfolio. In comparison, there are only 2 informal models; suggesting that their business plans are either too small or not robust enough to attract AECF funding.

3.7.2. As expected, most schemes provide extension services, and very few outgrower schemes grow staple crops

Nearly all outgrower schemes within the portfolio focused on cash crops, livestock, or agri-processing products. This is line with the expectation that very few schemes would be growing staples, which are more likely to be side-sold.

Extension and education/training services are the most common form of outreach to smallholders working with outgrower schemes, with 90% of schemes including some form of these services within their model. Input supply is also very common, with 80% of the portfolio projects offering inputs to outgrowers. Certification services are relatively rare, with only 25% of projects in the portfolio providing produce certification.

3.7.3. Intermediate schemes have been most successful in terms of outreach, while centralised models have been most successful in terms of household impact

Evaluating performance by typology is difficult, as projects across the portfolio projects are different ages, and some schemes may take longer to mature than others. However, there are some clear indications as to which types of outgrower schemes have experienced success, and in which metric.

Intermediate schemes have been most successful in terms of achieving their outreach targets, likely due to the use of intermediary organisations with pre-existing linkages to farmers that can be easily leveraged

Centralised models have been the most successful in delivering household impact, which can be probably be attributed to higher the degree of control exercised over the

scheme by the implementer (as opposed to intermediary schemes for example, which rely on a third parties).

The weakest group of outgrower schemes were multipartite models, which were substantially behind predictions, possibly due to coordination problems between a range of players. Informal models tend to be the smallest, and generate the least benefit both in terms of number of households and net benefit per household. However, they also appear to be quite rare; only two projects have been classified as informal across the whole outgrower portfolio.

3.7.4. Commercially, centralised models appear to perform best, with multipartite models struggling

Given that the AECF is a source of patient capital that funds more risky projects, it is unsurprising that many of the schemes are struggling from a commercial perspective – one might reasonably expect projects to show a profit only after several years of implementation. At this stage however, the data suggests that multipartite models particularly struggle financially, with the group as a whole making a loss. Centralised models are performing best commercially, with over 60% profitable.

4. Findings from interviews and case study analysis

While the portfolio analysis provides a high level sense of the design elements that contribute towards the performance of outgrower schemes, this chapter supplements this analysis by distilling the key themes emerging from a number of interviews and case study analyses into a series of findings on how outgrower schemes operate, the challenges they face, and who benefits. These high level findings are illustrated with case study examples of AECF-funded outgrower projects.

4.1. Bureaucratic delays can be fatal to projects

One consistent finding across the interviews with AECF grantees was that grantees systematically underestimated how bureaucratic processes could delay or even halt projects entirely. The 14 countries in which the AECF has funded outgrower schemes are often very difficult to operate in; only two are in the top half of the World Bank Ease of Doing Business Rankings. Furthermore, outgrower schemes often have more regulation-covered components than other agribusinesses – construction of processing facilities, export licenses, credit support, and input provision often all require regulatory approval. A bureaucratic delay in just one of these components can impede the entire project. Attaining these licenses requires navigating a complex web of local, regional, and national entities, who can be in direct competition with each other, and are also often implicated in illegal revenue-raising activities. These delays can severely affect project cash flow and can affect the grantee's commercial viability. This suggests that the AECF and other donors play a crucial role in helping to fund the establishment costs of outgrower schemes in a way that does not require grantees to start repayments during this period, when the feasibility of the scheme is at its most vulnerable.

Figure 20: Commercial performance and project challenge (projects 3 years and under excluded)

Country	Ease of doing business ranking
Rwanda	56
Kenya	92
Tanzania	132
Malawi	133
Mozambique	137
Ivory Coast	142
Sierra Leone	148
Burundi	157
Zimbabwe	161
Cameroon	166
Liberia	174
D.R. Congo	184
South Sudan	186
Somalia	190

Case study: Meat Kings

Meat Kings is an AECF-funded project operating in Tanzania. They aimed to build relationships with local farmers raising livestock – primarily sheep, cattle, and chickens. As part of their scheme, they built a new meat processing plant, which would triple their capacity.

The new facility was successfully constructed under budget. However, the company is still waiting on their Environmental Impact Assessment, which is required for all new industrial constructions. The company has been audited by an independent consultancy who have confirmed that their plant meets all requisite environmental standards. They have also received public messages of support from multiple cabinet ministers, who have urged all the relevant agencies to approve the project. Despite that, the factory has sat unused for a year. Furthermore, the grantee partially funded the project with a loan from the Tanzanian Development Bank. The Bank's disbursements are conditional on the new facility receiving all the requisite regulatory approval. Funding has therefore been delayed as well, further threatening project cash flow.

4.2. Side-selling can be a major challenge

Although side-selling and the attraction of selling for higher prices to other buyers is often mentioned as a problem in the context of outgrowers, interviews with AECF grantees revealed that the reasons and motivations for side-selling are more complex than simply selling to buyers offering higher prices. There appear to be three primary motivations for side-selling:

- To solve unexpected cash-flow problems experienced by the smallholder
- To provide for in-house consumption of the crop
- To earn more through attracting higher prices offered by third-party buyers

Although much of the focus of literature is on that last cause of side-selling, this research suggests that side-selling due to the first two reasons are relatively more common. Farmers face highly irregular cash flow, with most of their income in the harvest season. Unexpected costs, such as health emergencies, during non-harvest periods can leave them short of cash. To cover these costs, farmers have the option of selling a portion of their crops prior to harvest to local buyers, although doing so yields much lower prices. However, it does provide a cash injection at the time in which they need access to funds.

Side-selling can also be a problem through home consumption. Multiple projects confirmed that outgrowers often preferred to use their produce for their own household consumption rather than sell it to the grantee. In one project, purchases of soya beans were 85% below estimates, a result which the grantee argued was mostly attributable to home consumption. Another interviewee noted that whilst their bean-growing outgrower scheme was developing well, they expected to encounter a problem once outgrowers realised that their beans they were growing could easily be eaten.

Case study: C. Dorman

C. Dorman operates a large outgrower scheme growing coffee in Rwanda. Although they can offer a markedly better price compared to local buyers, they estimate that during the early stages of the project 40% of the coffee produced by their outgrowers was sold prior to harvest. Local buyers would purchase coffee either at the flower stage, effectively buying the coffee before it has even been grown, or at the premature green bean stage. C. Dorman estimates that prices can be as little as 10% of what outgrowers achieve for fully mature coffee beans. However, selling beans prior to harvest does allow outgrowers to realise income immediately.

After years of working with outgrowers, C. Dorman now estimates that they purchase 98% of the coffee produced by their outgrowers. As farmers realised the price benefits of selling fully mature coffee beans to C. Dorman, the amount of side-selling started to decline. C. Dorman also has been building and developing their relationship with their outgrowers, to the extent that if farmers do face cash-flow constraints they can work within the community to ameliorate that.

Finally, side-selling can occur where there are local markets with higher prices, and where there is the added incentive on not having the cost of inputs deducted from the prices being paid. Grantees identified three routes to halting side-selling through this mechanism; raising prices, developing relationships, and growing crops for which there is no local market. Multiple interviewees mentioned that they had to raise prices from their initial level to better compete with other local buyers. Over time, outgrower projects can even offer prices lower than the local market spot price, as outgrowers understand the additional benefits that outgrower schemes offer, such as extension services, or access to high-quality inputs. For example in Sierra Leone, outgrowers producing maize have continued selling to Pajah's AECF-funded project, despite local competitors offering higher prices. Reliable inputs and a guaranteed contract have helped bridge that price gap.

Case study: Quality Food Products

Quality Food Products is an outgrower scheme located in Arusha, north Tanzania. They have managed to develop outgrower schemes working with common food staples, such as maize and beans. To deter side-selling, they use non-local variants of both crops, meaning that there is no local market for that crop. Monitoring side-selling also becomes much easier; as if a local market does develop, then that suggests there is a side-selling problem. Outgrowers working with Quality Food Products grow yellow maize rather than the predominant white maize, and the company also works with 80 different varieties of bean, many of which are new to Tanzania. Despite growing common staples, introducing variations which distinguish their crop from the local variety has helped deter side-selling.

4.3. Implementing smallholder training successfully is crucial

Working with smallholders to improve their farming practices and ensure that skills are actually implemented on-farm can be challenging. While almost all (90%) of AECF outgrower projects offer extension services of one form or another, the way in which training and advice is offered is the determining factor in whether this is ultimately successful in improving both quality and yields.

Extension officers can provide customised advice when visiting individual farmers, which is useful in diagnosing farm-specific problems. In the initial stages of a programme where the practices being introduced or the crops themselves are new to farmers, several schemes cited the success of demonstration plots as a key component of their farmer education efforts. Demonstration plots provide smallholders with a physical reference point against which to compare their practices, which is more effective than training which simply provides pictures. The plots can also serve as a very real example of how good farming practices can lead to increased yields and quality – rather than the farmer having to put in the physical labour and capital themselves before “proving” that this has an impact on the final crop. Demonstration plots can either be located near a central training venue (or, in the case of a nucleus model, be part of the central plantation), or they are located close to farmers. C Dorman, for example, works with lead farmers in a farmer group to convert a portion of their land into a demonstration plot which means that local farmers are able to regularly see the results that can be achieved by implementing the regular training that they receive.

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4.4. Recruitment should leverage existing relationships with smallholders, rather than establish greenfield projects

Establishing an outgrower scheme requires the commercial partners to recruit smallholders. This can be difficult if there are no pre-existing relationships, as it can take time and effort to build trust and to adapt to the local context. Developing existing relationships seems to be the most effective way of achieving impact in a relatively short space of time, suggesting that smallholder schemes that aim at improving quality and yield off their existing production base are more likely to be successful in the short to medium term.

The most successful schemes have done this in two ways. Firstly, commercial partners that have long relationships with smallholders in their area of operations are able to realise gains by focusing on extension and input supply services, leveraging their existing relationship and knowledge of what is required in that particular geographic area and for the specific crop they are working with. Secondly, where there are no existing relationships, agro-processors can partner with intermediaries to access smallholder farmers. These intermediaries can be farmer groups themselves, which provide access to large numbers of smallholders through a limited number of contact points, or through buyers. This partly explains why intermediary models in the AECF portfolio performed best in achieving their beneficiary targets.

An important caveat is that while intermediary models are able to achieve impressive outreach numbers, achieving gains in quality and yield is most effective when the commercial partner is close to the ground, rather than relying solely on third parties. This suggests why multipartite models achieve relatively less impact, as the agro-processor is generally removed from growers. Being active at the farmer level allows for the building of relationships (which mitigates against issues such as side-selling), and allows for the early identification of problems.

A good example of this within one project is Meat King, who have had significant success improving the quality and weight of chicken carcasses they receive by working directly with poultry outgrowers (providing credit, inputs and training). In the case of beef, however, farmers are located in rural areas and so the company works with cattle buyers who then bring the cattle in for slaughter. Gains in quality have been much harder to achieve, partly because the farmer and the commercial partner are one removed, both geographically and through buyers/middlemen.

Case study: Quality Food Products

QFP run outgrower schemes in Tanzania growing saffron, beans, maize, and hemp. They operate a very close monitoring scheme with their farmers, who are visited regularly – at least once a month. This is enabled by the fact that they work with fewer, larger farmers. This contact means that any issues with the crop are picked up at a very early stage, protecting the input loans that they extend to the farmers. The regularity of the monitoring undertaken means that they are able to predict the final yields and quality only a few weeks after germination, which means they are better able to plan harvesting, processing and marketing strategies. It also acts as a deterrent to side-selling, by highlighting discrepancies between predicted yields and what QFP purchases. credit-worthiness.

4.5. Outgrower projects work primarily with men

Interviewees reiterated what previous studies had found – outgrower projects do not have a strong female component. There appear to be two principal reasons for this. Firstly, a common basic requirement for outgrowers is access to land. In many regions in which the AECF operates, women do not have access to land due to legal or societal restrictions on land ownership, and so are not able to directly participate

in an outgrower scheme. An exception to this is poultry, where female outgrowers are often targeted and are able to participate because much less land needed (for example the area around a homestead can be used), and activities can also be combined with domestic work. These schemes therefore offer an income-generating activity to women without disrupting traditional household structures. For example, Meat King run a small poultry outgrower business, of which 56% of the participants are women.

Case study: B'Ayoba

B'Ayoba works with outgrowers in Zimbabwe to harvest the wild fruit of the baobab tree. Outgrowers have to be registered before working with B'Ayoba. To access and register farmers, B'Ayoba worked through pre-existing local community groups. These groups reflected traditional patriarchal structures, and as a result the registration process favoured men. Women were allowed to register, yet interviews revealed that initially they felt discouraged from doing so. Having registered, women were almost twice as likely to start actually collecting baobab for B'Ayoba.

For more information on female participation in B'Ayoba, please see the AECF case study *Women's economic participation in B'Ayoba*.

Secondly, outgrower projects often involve written contracts or registration - over half of the projects funded by AECF used formal written contracts with outgrowers. This component ultimately discriminates against women, due to societal expectations that such deals should be made with the male head of household. In practice, interviews suggested that there was a role for women in the household providing farm labour even when not the primary contract holder. For example, New Horizons, an outgrower scheme in Mozambique, stated that contracts are usually signed by the husband even though much of the work is done by the wives.

4.6. Outgrower schemes usually don't work directly with the poorest in society

While there is some variation, interviews and analysis of grantee reports suggested that outgrowers do not work with the poorest in rural societies. Projects normally have a set of requirements which effectively exclude the absolute bottom-of-the-pyramid. Interviewees mentioned a minimum land-size, experience growing cash crops, or financial credit track record as conditions for registration. In most areas of Africa,

However, whilst outgrower schemes do not normally work with the poorest, they are generally reaching smallholders in the lowest income quartile. A qualitative assessment of project documentation suggests that most outgrowers working with projects funded by the AECF have under 2 acres of land, identifying them clearly as smallholders operating below or around the poverty line.

having sufficient land to feasibly produce a commercial crop already places the smallholder above the community average. Some projects have had to iterate away from smallholders entirely, after realising that without working at a greater scale the scheme was not commercially sustainable. Other projects have tried to organise smallholders into associations, and effectively treat them as one large farmer. For companies, it may not be commercially feasible to reach out to the most vulnerable, who may have little land or education.

However, whilst outgrower schemes do not normally work with the poorest, they are generally reaching smallholders in the lowest income quartile. A qualitative assessment of project documentation suggests that most outgrowers working with projects funded by the AECF have under 2 acres of land, identifying them clearly as smallholders operating below or around the poverty line. Furthermore, outgrowers often hire casual labour to assist during key harvesting phases. This impact is not captured in the AECF result's framework – instead, it contributes to the costs for the outgrower (thereby decreasing household net benefit). Yet it is likely that the casual labour hired by outgrowers are closer to the bottom of the pyramid than outgrowers themselves. For projects working with medium-scale outgrowers, the additional labour hired can be quite

Case study: Sable Park Enterprises

Sable Products operates a poultry outgrower scheme in Zimbabwe. Originally, they aimed to place 100-500 broilers with their outgrowers. However, working on such a small scale generated high transaction costs and was not commercially sustainable. The company now aims to contract outgrowers raising batches of 10,000-20,000 broilers, which entails capital investment on behalf of farmers of over US\$10,000. This is clearly beyond the reach of smallholder farmers.

significant; outgrowers contracted to Sable Park Enterprises, described in the box above, hired an average of 5 permanent workers each, at a salary of \$100 per month. Outgrower schemes catalyse the creation of small-scale commercial farms in rural communities – whilst the poorest may not be the farmers working directly with AECF grantees, they are hired and earn income indirectly.

Some outgrower schemes have also had more success in reaching out directly to poorer smallholders. Projects requiring high initial capital investment, new technology, or significant amounts of land act as insurmountable barriers to poorer smallholders. In comparison, projects working with crops traditional to the area, which require limited capital investment or technology adoption, appear to have had more success in reaching poorer smallholders.

4.7. Multipartite schemes can distance companies from outgrowers

In multipartite projects, the buying company outsources some of the services extended to outgrowers to other organisations. Common examples include NGOs to provide extension services and input provision, and microfinance institutions to provide credit. The consequence of this structure can be that smallholders have little contact with the buying company; conversely, the company has little direct knowledge of what is happening in the field.

There are examples of this from the AECF portfolio. A site visit to one multipartite project stated the company “does not focus on monitoring the beneficiaries – it relies on [the NGO] to do this. [The NGO] has developed a strong relationship with outgrowers”. The report concluded “large corporations must show themselves to be directly involved at all levels of the project and checks should be made that the real work of the project is not outsourced to another organisation”.

4.8. Working with smallholder farmers makes commercial sense

Establishing an outgrower scheme requires significant investment, both in terms of time and money, on the part of the commercial partner. While donor programmes such as the AECF can subsidise some of these costs through grant and concessionary loan financing, outgrower schemes still make firm commercial sense for companies. The commercial proposition stems from three factors.

Firstly, working with smallholder farmers is often a matter of necessity, since the majority of land is worked by smallholder farmers in one form or another. Accessing increased amounts of produce therefore requires engaging with smallholders. Secondly, working directly with smallholder farmers can remove the middleman or intermediary buyers from the value chain, leading to higher profit margins for the firm. This is usually the case in centralised and nucleus models. While this provides a strong incentive for the firm, from a development perspective it can lead to job losses in the case of the middleman, and where smallholders have exclusivity agreements with processors this can create a dependency – and if the processor is no longer around, and buyers have been forced out of the market, smallholders will have to source new buyers for their produce. Finally, working directly with smallholders can increase not only yields but also the quality of produce, which is then able to be sold for a higher price – some of which accrues to the buyer or processor.

4.9. Monitoring outgrower schemes can be very difficult

Grant programmes typically require grantees to report back key development indicators related to beneficiaries. For the AECF, grantees have to monitor the number of household beneficiaries and the net household impact. Since some outgrower schemes provide all the inputs on credit, purchase all the crop, and only work with a single crop, constructing a simple yet robust beneficiary model with the estimated benefits and costs to a single farmer participating in a project is very straightforward. However, for some outgrower schemes it can be much more difficult. When projects work with multiple crops grown by heterogeneous groups of farmers, grantees don't buy all of the produce, or don't control inputs, developing an accurate beneficiary model is challenging.

One grantee related how when they had approached farmers to try and understand how much they were spending on inputs the farmers refused to reveal this information, because they feared that the company was trying to find an excuse to lower the prices they paid for their produce. Another grantee struggled due to the heterogeneity of the different groups of outgrowers they were working with. For some outgrower projects, developing an accurate beneficiary model requires a considerable investment in time and resources which can slow implementation of the entire project.

Using technology can be an effective and efficient way of developing monitoring schemes. Quality Foods, for example, is developing a mobile-based app to track yield and productivity. Mount Kenya Gardens uses mobile-payments, which both reduces transaction costs and generates accurate data as to how much farmers are producing. Other sophisticated schemes use GPS and time-logged data to verify that their agents are monitoring accurately. Developing IT projects is, however, expensive, and can require considerable technical expertise. They may not be suitable for smaller outgrower schemes, or companies with limited resources.

5. Conclusions and recommendations

This study has focused on exploring when outgrower projects are successful, and how they surmount the challenges they face. Outgrower projects have the potential to realise significant development impact. However, there is considerable variation in project design, and concomitant variation in project success. The following recommendations are aimed at both outgrower projects, and development programmes funding outgrower projects. They act as a guide as to how to design and implement outgrower schemes, and as a tool to help development programmes better identify, fund, and assist outgrower projects and outgrowers.

Recommendation 1: Given the commercial challenges involved in implementing outgrower schemes, grant management programmes should focus on their role as providers of patient capital.

The unique advantage that market systems development grant management programmes have over commercial finance is as a provider of patient capital. Whilst financial markets in the countries in which the AECF operates are still under-developed, short-term financing is generally available. However, outgrower projects can take years to fully establish and start demonstrating both commercial and development return. To do so, they require long-term affordable financing, specialist support, and risk-tolerant investors. That capacity does not currently exist in the private sector, and development aid can fulfil a very valuable role by filling that niche.

Recommendation 2: Monitoring is crucial to the success of outgrower projects. Development programmes should encourage the use of technology or adoption of farmer cooperatives to aid monitoring. At the same time, development programmes should ensure their own monitoring frameworks are workable for outgrower schemes.

A consistent finding across both the portfolio review and from our interviews was that monitoring outgrowers closely was vital. Multiple grantees highlighted the importance of staying connected to their outgrowers, and knowing as much as possible about them. The portfolio review revealed that both from the development and from the commercial perspective, multipartite schemes, which distance outgrowers from the contracting company, were the least successful. Maintaining a close connection helps with maintaining yield and produce quality, and can deter side-selling. It also builds up trust and loyalty between company and outgrower, which can lead to larger extensions of credit and higher prices.

Information-gathering and monitoring outgrowers can be expensive. If resources are not available, an alternative could be to ‘step-up’ one level and establish connections with farmer groups or cooperatives. These existing networks can then be leveraged to help gather information or monitor farmers. An alternative route is to use technology. Mount Kenya Gardens, for example, handles payments to outgrowers through mobile payments. This not only reduces transaction costs, but also helps them better monitor outgrower incomes. More sophisticated schemes can use farmer-management-systems, which use mobile technology to track training, yield, costs, and income. Developing farmer-management-systems entails considerable investment, and therefore is perhaps only suitable for large and established outgrower projects.

Development programmes working with outgrowers should also note that outgrower projects vary greatly. For some outgrower projects, constructing accurate and robust monitoring frameworks is relatively straightforward; they have a list of registered farmers, full control of inputs, and full exclusivity over produce. For other outgrower projects, particularly intermediary and multipartite models where the grantee is “removed” from the final beneficiary, reliable monitoring frameworks can require considerable investment. Alternatively, outgrower projects which entail considerable investment at the outset from both smallholder and company, and which may take years to start yielding considerable income, often do not easily fit within conventional results monitoring frameworks. This variation should be taken into account when development programmes are assessing and comparing different outgrower schemes.

Recommendation 3: Development programmes should recognise and promote the multiple avenues by which outgrower schemes can reach the bottom of the pyramid.

The poorest within rural communities can often face major impediments to accessing outgrower schemes, mainly due to land requirements. Crops grown traditionally in the area and which require limited capital investment are more successful in making outgrower projects accessible to the bottom-of-the-pyramid. Yet perhaps the most effective way that outgrower projects can impact on the very poor within rural communities is as secondary beneficiaries on outgrower schemes targeting small/medium-scale farmers. This mechanism has been under-reported within the AECF, yet case studies reveal how important this impact avenue can be. In the future, development programmes working with outgrowers should work to identify and monitor

employment by outgrowers. A further step would be to incentivise and encourage outgrowers to extend employment opportunities to other members of their local community. That, however, may require more data and analysis to understand both how to incentivise outgrowers to outsource more work, and how labour opportunities can be best structured to maximise impact for bottom-of-the-pyramid.

Informal schemes, which usually require less land, capital investment, and technology adoption, may have more success in reaching the bottom of the pyramid. However, their limited scale not only limits impact, but also makes informal schemes a commercially risky proposition. This is reflected both in the commercial performance of the informal schemes in the AECF portfolio, and in their relative under-representation – the latter suggests that few models were robust enough to pass through the AECF's application process. There is thus a trade-off when funding informal schemes; whilst they may have more success reaching the bottom of the pyramid, impact is limited and overall risk is higher.

Recommendation 4: Understand and engage with the barriers which women face in engaging with outgrower projects.

An underreported feature of outgrower projects is the extent that women are excluded. There are complex reasons underpinning this exclusion, including lack of access to land, reliance on patriarchal power structures, and traditional beliefs that contractual relationships are formed with the male head of household. There is no single reason, as the type of barrier will vary by type of outgrower project, as well as the operating environment. Development organisations working with outgrower schemes need to recognise the extent to which women are excluded in those programmes, and understand the underlying reasons. Without recognition and understanding the underlying causes, attempts to address female exclusion in outgrower programmes will not be successful. As a first step, this requires gender-disaggregated monitoring of beneficiaries. Secondly, development organisations need to highlight the gender disparity to grantees, and work with them from inception to develop specific strategies to address this. This could include contracts co-signed by both male and female head of household and running training sessions for women.

Recommendation 5: More work to promote the dissemination and replication of outgrower models is needed.

A core aim for the AECF is that its successful projects are replicated by other companies. For outgrower schemes, this is perhaps particularly difficult, for two reasons. Firstly, outgrower schemes require substantial initial investment,

and may take several years to start generating returns. This capital requirement deters potential replicators, particularly in environments where commercial financing is very difficult to attract. Secondly, as noted above, a core component of successful outgrower schemes is a relationship between smallholders and firms. This both deters grantees from expanding to new geographical regions, where that link doesn't exist, and is a barrier to new market entrants.

That is not to say replication is not possible – some replication has occurred within the AECF portfolio; AK Glitters, a poultry outgrower project in Tanzania, explicitly based its business plan on other AECF-funded outgrower schemes. Yet to incentivise other companies to replicate successful projects, given these barriers, the benefits of outgrower schemes, and the tools with which to circumvent common challenges, both need to be widely circulated.

Recommendation 6: Multipartite schemes run the risk of situating companies too far from smallholders. Development programmes should alert multipartite projects as to the structural risks, and work with them to find solutions.

Multipartite schemes funded by the AECF performed poorly from both the commercial and the development perspective, as illustrated by the portfolio analysis. One problem highlighted by case-study analysis was that multipartite schemes often distanced contracting companies from outgrowers; the primary point of contact for smallholders was instead an NGO or partner institution. Creating distance between the firm and smallholder makes building and maintaining relationships far more difficult. This has ramifications for side-selling, quality of produce, and the exchange of other services such as input or credit. It also makes data monitoring more difficult, which again can particularly affect yield and quality of produce.

There may be good reasons to encourage multipartite schemes; in some countries, for example, it is legally easier to outsource the provision of credit to a specialised financial institution. However, development programmes working with outgrowers should highlight the pitfalls of partnering with other institutions and develop mitigation strategies. This could involve using technology as an alternative means to monitor outgrowers, or processing all credit, extension services, and inputs through the contracting company.

Recommendation 7: Leverage existing relationships with smallholder farmers when establishing an outgrower scheme.

Using existing relationships to reach out to outgrowers can help increase the chances of successful implementation. This either means funding companies with an established

presence in the area, or funding intermediary projects which use pre-existing farmer groups of cooperatives as a means of outreach – the portfolio analysis revealed intermediary models were the most successful in terms of outreach, having achieved 91% of their target number of households. Interviews with grantees also confirmed the importance of having some relationship with farmers in the area prior to project implementation. Funding entirely new projects who aim to build an outgrower network from scratch should only be contemplated if the project is particularly innovative.

Recommendation 8: Side-selling can be a major impediment to outgrower projects. However, the problem is primarily related to cash flow and home consumption, not higher prices offered by other buyers. Outgrower projects should seek to understand why side-selling is an issue, and aim to counteract that, rather than simply raising prices. Building a close relationship with outgrowers is also crucial.

Understanding why outgrowers don't sell to their contracting company is key to meeting the challenge of side-selling. The problem is more complicated than simply higher prices; outgrowers may also be retaining produce for in-house consumption or may be forced to sell pre-harvest to cover cash-flow problems. The latter problem can be resolved by offering lines of credit against future produce; this helps secure crop for companies, and achieves higher prices for outgrowers. In-house consumption can be tackled by encouraging rotation with a staple crop, or a form of intercropping - this provides farmers with food security, and crop rotation can improve yields and maintain soil health.

A consistent finding across interviews was the importance of maintaining close relationships with outgrowers to counteract side-selling. Developing relationships builds up trust and loyalty between company and outgrower, which can help deter side-selling. This suggests that side-selling should be more prevalent during the initial stages of an outgrower scheme, but that over time as relationships deepen side-selling should fall.

Recommendation 9: Outgrower schemes should factor in considerable time for bureaucratic delays when developing their business plan.

Across the portfolio, projects experienced delays in implementation, as demonstrated both by the interviews and by the progress against development targets. A key source of delay was securing regulatory approval for projects, which often took far longer than expected. These unexpected delays resulted in severe cash-flow problems as projects fell behind schedule. This problem is particularly prevalent for outgrower schemes because they often have

more components requiring regulatory approval, and projects often do not start generating significant cash flow until several years into implementation.

Assuming more time for securing all the appropriate licenses would help businesses more accurately model their business plan and therefore would help in predicting future cash-flow. This should lead to smoother implementation. Challenge funds and other development programmes assisting outgrower schemes should highlight the difficulty of securing full regulatory approval. There may also be scope for some development programmes to do more in helping projects circumvent bureaucratic obstacles, either through more directed technical assistance, or by leveraging their influence to set up dialogues with state institutions.

Recommendation 10: Focus on training and demonstration plots at the outset, and tailored extension services further into implementation.

Implementing extension services successfully is crucial to outgrower schemes. Using farmer managed demonstration plots, particularly during the inception phase and the early years of implementation, plays an important role in assisting farmers to absorb training and education. This training should also be sensitive to the local environment, in that farmers with poor yields benefit substantially from incremental training that focuses on basic farming practices. More complex agricultural training and farm visits (which involve significant costs) can be deferred until the scheme is developed and outgrowers have experience. At this stage of implementation, the problems being experienced by smallholders are usually specific to their farm, and so tailored advice is needed.

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26. Outgrower projects spanned across the 4 labels previously used by the AECF in categorising agricultural schemes – marketing and distribution, input supply, primary production, and agri-processing. These figures therefore do not equate to previous figures in AECF impact reports.
27. Profitable projects are displaying profitability, near-profit projects have losses less than 50% of revenue, and major-loss projects have losses greater than 50% of revenue.

