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FOOD SECURITY IN AFRICA SERIES: OUTGROWER SYSTEMS FOR INCLUSIVE AGRICULTURAL GROWTH

EXECUTIVE SUMMARY

The *CCAPS Food Security in Africa Series* is composed of four briefs that focus on combating food security vulnerability in Sub-Saharan Africa. This fourth brief in the series details the history and controversy surrounding contract farming—also known as outgrower systems—and their potential role as a vehicle for inclusive agricultural growth. The purpose of this brief is to pinpoint practices that increase the bargaining power of farmers and the likelihood of positive outcomes for both firms and smallholders. It outlines the benefits and risks of contract farming, and lists best practices for firms, smallholders, and government to ensure optimal outcomes for all participants.

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Combating food insecurity is one of the biggest challenges facing development in Sub-Saharan Africa, where approximately 30 percent of the population is undernourished.[1] The effect of uncertainty in seasonal temperatures and rainfall patterns on agricultural production, combined with growing urban populations, makes the task of achieving food security increasingly daunting. One of the largest barriers to food security is lack of access to food, which the Food and Agriculture Organization defines as individuals having "adequate resources for acquiring appropriate foods for a nutritious diet."[2] Resources refer largely to economic resources, especially income. Raising incomes is thus an essential step towards achieving food security for people who cannot afford food with adequate calories or food containing sufficient nutritional value.

The agricultural sector, which employs 70 percent of the population in Sub-Saharan Africa, has huge potential for growth.[3] If done inclusively—where smallholder farmers as well as large agricultural firms reap the economic benefits—this growth could raise rural incomes and therefore rural access to food. Simultaneously, such growth in the rural agriculture sector has the potential to increase yields available to feed growing urban populations while providing technology to smallholders to decrease their vulnerability to erratic weather patterns.

Current trends in large-scale agricultural investment, however, include the crowding-out of smallholder farmers and the devotion of large tracts of land to cash crop production, both of which could negatively affect rural food security and livelihoods.[4] Smallholders are at a disadvantage since they lack the capacity to achieve commercial-scale agricultural growth on their own. They also often lack new technologies, market linkages, access to financing, and the business experience to operate in modern markets.[5] Through the adoption of fair outgrower practices, agribusiness has the opportunity to spur socially responsible economic growth.

Outgrower systems, also referred to as contract farming systems (CF), are business models wherein an agricultural firm contracts out production to

small-scale farmers or an organized group of farmers. Firms commonly provide farmers with inputs and advanced technology to ensure adequate supply, while farmers' access to land and labor reduces the firms' capital costs. Positive development outcomes seen in the past include raising rural incomes, increasing farmers' access to markets and new technologies, and improving farmers' knowledge of business.[6] Outgrower systems, therefore, present a potential avenue for inclusive agricultural development; however, they also have the potential to be exploitive due to asymmetries in bargaining power between firms and smallholders.

First, this brief will discuss the controversy surrounding outgrower systems and smallholder welfare, especially as it relates to food security. A case study of inclusive outgrower rice production in Ghana will be examined, followed by best practices and recommendations for firms, farmers, and governments.

OUTGROWER SYSTEMS AND SMALLHOLDER WELFARE

There are a number of different types of outgrower systems, but all hinge on the development of mutually beneficial relationships between companies and smallholder farmers, wherein companies, or buyers, provide inputs and technical support to farmers in return for access to their product. Typically, farmers are motivated to enter into such contracts to ensure a stable selling price, access to technology and information, and subsidized or free inputs. The buyer is typically attracted by the higher levels of control over the type and quality of their product and the lower costs of investment.[7]

Sub-Saharan Africa has experienced a dramatic increase in private sector outgrower systems over the last 20 years, primarily resulting from the industrialization of the global food industry. This shift is the combined result of demand-side factors, including population growth, new preferences for organic and fair trade products in developed countries, and increased urbanization, as well as supply-side drivers, such as the liberalization of production chains, new high-yield technologies, and advances in communication and informational systems.[8] The place of smallholders in the growing world of industrialized African agriculture is uncertain. Accompanying increased industrialization is the fact that, unlike 20 years ago, a large proportion of the firms involved in outgrower systems are firms from developing countries such as Novos Horizontes, a poultry company in Mozambique,[9] Mondi, a South African paper company,[10] or GADCO, a Ghanaian rice processing company.[11]

Outgrower systems have attracted political and academic interest over the last quarter century. During the 1980s, the literature concerning contract farming was highly polarized, with a large proportion focusing on the risk of smallholder exploitation, a risk that still exists today.

Outgrower systems today are very different from those that were prominent 25 years ago. This change is due to many factors, including increasing participation of firms from developing countries and firms focused on organic farming and fair trade, as well as heightened visibility due to improved communication technology. Additionally, the literature on outgrower systems overwhelmingly finds a positive correlation between farmer participation in outgrower systems and income growth.[12] Outgrower systems generally are seen in a positive light, and a number of agricultural development organizations, including the International Fund for Agricultural Development, the World Bank, and the International Food Policy Research Institute (IFPRI), endorse outgrower systems as a vehicle for development.

The implementation of outgrower systems varies widely, in terms of their structure, contract terms, and on-the-ground management. This variability causes equally varied effects on smallholders, ranging from exploitive to highly beneficial. A number of individual case studies and analyses over the past 10 years have indicated that outgrower systems, if managed correctly, can be an effective private-sector-led strategy for poverty reduction.[13]

HOW OUTGROWER SYSTEMS AFFECT FOOD SECURITY

There is a substantial body of evidence that outgrower systems improve the income and livelihoods of farmers involved, but does that translate into improved food security?[14] Studies examining the relationship between food security and outgrower systems, which date almost exclusively from the late 1980s and 1990s, suggest that increases in income from outgrower systems were typically controlled by males, and so did not translate to increases in the percentage of income spent on food, which was typically purchased by women. Instead, additional income from contract farming was most likely to be spent on school fees and housing.[15] This does not necessarily mean that food budgets did not increase in terms of absolute value, but it does suggest that the increases in income may not significantly improve food security.

In the late 1980s and mid-1990s, a number of reports were released suggesting that contract farming could exacerbate food insecurity by taking resources away from subsistence farming; however, in most cases land devoted to contracted

crops was previously dedicated to cash crops, thus land was typically not diverted from subsistence production.[16] Studies investigating the effect of contract farming on nutrition and food security have come to a wide range of conclusions.[17] Many attributed the relationship between contract farming and decreased food security to contract-enforced monocropping, a practice where farmers plant only one crop. At the time, it was common for firms to discourage raising livestock and require farmers to focus all their resources on production of the contracted crop, due to health and quality concerns. This practice is detrimental to food security because it often forbids subsistence farming, which decreases the variety of foods available to farming families and is detrimental to nutrition. Furthermore, repeatedly planting the same crop depletes soil fertility, potentially hurting farmers' income and productivity in the future.

There is a large gap in the literature concerning the effect of today's outgrower systems on nutrition and food security.[18] Contracted monocropping is out of vogue, in part due to the harsh criticism it received in the 1990s. A growing number of firms specializing in organic and fair trade products have begun using outgrowing systems as a means of production, and it is common for them to encourage intercropping, agroforestry, and crop rotation as techniques to improve food security and prevent soil degradation. Firms using outgrower systems have also noticed that income differentials from contract farming often do not transfer to food budgets.[19] As a result, many systems today work actively to recruit women farmers, as a wide body of research suggests that increasing women's income will result in increased food budgets. Given this shift, a new assessment of contract farming's effects on food security is necessary.

OUTGROWER MODELS

The purpose of this brief is to identify outgrower best practices, a hefty task given the variety of approaches, both in terms of structure and firm motivation.

There are a number of different outgrower models, which vary in level of formality and decentralization. The ideal model for success in terms of farmer and buyer satisfaction depends on the properties of the crop, the needs of the firm and farmers, and the specific country context. Each model is geared towards different types of crops and has different contract properties. More centralized models tend to be more successful in terms of farmer welfare. This is because firms using these models are typically required to build local facilities. Given the high sunk cost, firms are anxious to maintain good relations with local communities and are not afraid to invest in extension services. The local presence often results in a more intimate firm-farmer relationship,

OUTGROWER SYSTEMS: BENEFITS AND RISKS[20]

FARMERS:

Benefits

- Low-cost or free inputs
- Increased access to credit
- Greater access to markets
- Decreased price risk
- Guaranteed buyer
- Free technical advice and assistance
- Free technology

Risks

- Buyer contract default
- Buyer exploitation of farmers, manipulation of contract quantity of price
- Farmer contract default as a result of erratic weather
- Farmers that fail to produce may become indebted

BUYERS:

Benefits

- PR benefits/socially responsible
- Works around land constraints
- Less risk than purchasing on open market
- More consistent quality than purchasing on open market
- More flexibility to adapt to market preferences (e.g. switch to organic)

Risks

- Farmers may sell outside the contract (side-selling)
- Insecurity if the farmer lacks land tenure
- Farmers may use inputs for other crops, reducing their yields of contracted crops
- Farmer discontent resulting from poor buyer management

which decreases the likelihood of contract default.[21] Models where firms are less invested in the area are more likely to default and have issues with farmer loyalty.

The important factors that differentiate successful models break down into structural elements that affect smallholder bargaining power or capacity to produce. A firm's approach to each of these has direct implications for the welfare of their contracted farmers and the success of the venture. Elements include farmer access to inputs, the clarity of firm-farmer agreements, how growers are managed, and the type of firm participating.[22] Furthermore, following certain guidelines can lower the risk of farmer default in the form of 'side-selling,' a major concern for firms involved in outgrower systems.

Access to Inputs

Rural smallholder productivity is largely constrained by limited access to inputs and credit. Outgrower systems with large buyer investment mitigate this issue. However, the willingness of buyers to contribute to inputs often depends on the specifications of the crop under contract. Commodities that require specific inputs to meet standards or inputs that are not available on the open market are usually supplied on credit at either market price or subsidized prices; then, after harvest, the buyer subtracts what is owed from the farmer's pay. This can be extremely beneficial to farmers in remote areas with poor market linkages, but only if the contract price reflects the commodity's actual market value. A 2012 study examining farmer preferences with respect to contract farming concluded that access to inputs and credit was the primary driving force behind farmer participation in outgrower systems.[23]

Access to Extension Services

Buyers often provide extensions services and technological support to farmers. Again, this is most likely when the crop under contract requires specialized inputs or care, but also can occur with staple or bulk crops. Extension services can provide farmers with knowledge about how to use new technologies, different farming approaches (e.g. agroforestry, organic farming, or conservation farming), and safety standard compliance. Farmers can then apply this knowledge to crops outside of their contracted fields, such as subsistence crops, or crops intended for local markets. Transfer of technology and information is thus one of the most beneficial aspects of outgrower systems. In fact, there are many documented cases of smallholders becoming independent commercial farmers by using the technical expertise gained during participation in outgrower systems.[24]

Provision of extension services depends heavily on buyer capacity, or the availability of a third party firm to carry out extension services. Ideally, buyers carry out the service themselves, which raises credibility and increases community trust. This, again, decreases the likelihood of side-selling and increases farmer loyalty. Extension services are important for buyers, too; a recent survey cited extension services as vital to firms receiving their desired product in terms of quantity and quality.[25]

Firm-Farmer Agreements

Outgrower systems involve agreements between buyers and farmers, which can range in formality from verbal agreements to clearly delineated contracts. Transparency in determining the contract terms and clarity in the contract itself is vital, as disagreements over contract terms are the primary source of contention between farmers and buyers.[26] Firms often prefer ambiguous terms, with only the contract volume explicitly stated. This allows price to fluctuate with the market, but can also allow firms to severely lower their buying price if the product does not meet ambiguously defined quality specifications. Vague terms are a recipe for failure of outgrower systems. Such contracts often lead to misunderstandings and resentment and, in the worst cases, outright exploitation of farmers by firms.

Farmers, too, prefer arrangements that allow buyer price to fluctuate with the market. In fact, one of the main deterrents for farmers considering entering a contract is fear of underpayment due to market price rising above the contract price.[27] Contract price, therefore, should be flexible enough to fluctuate with the market price while not dipping below a pre-determined minimum.

In short, farmers prefer contracts that are in a written form, provide inputs (seeds and fertilizers), provide technical assistance, allow for variable output quality, and allow for variable pricing.

Attention to these preferences lowers the likelihood of side-selling and other forms of farmer default, while increasing farmer welfare. Due to the high costs of extension services and technical support, such arrangements are expensive and may not be economically sustainable for smaller firms. Firms without the capacity to comply with these specifications are generally ill-suited to outgrower systems.

Grower Management

The structure used to organize growers and manage service provision affects system longevity and the level of benefits available to the community. Whether through farmers' groups, the firm itself, or a third party, availability of extensions services, farmer organizations, and other systems of farmer support are key to the success of outgrower systems.[28]

Management that engages with smallholders in a transparent manner and supports community development can vastly improve the farmer-buyer relationship. One way to do this is through dealing exclusively with farmer organizations or establishing farmer groupings. Due to their cohesive nature, farmers' groups raise smallholder bargaining power, increasing the likelihood that contracts will reflect farmers' needs. Farmers' groups are advantageous for firms as well, as they increase peer accountability and lower the risk of side-selling. Using groups also allows farmers to take leadership roles in management activities like input supply coordination and harvest logistics. NGOs or firms themselves can also carry out these tasks, but they require higher levels of firm investment. The multipartite, centralized, and nucleus estate models are most effective at providing these services because larger firms capable of such investments generally use them. Centralized systems also have more potential for longevity because of high sunk costs and the firm's close proximity to the farmers.[29]

Type of Firm

Large processing firms have higher levels of capacity for providing inputs, extension services, and additional support. Additionally, as processors they rely heavily on growers for a constant supply of raw material. This reliance increases farmers' bargaining power, while firm capacity for input provision and support increases the likelihood of farmer loyalty.[30]

EQUITY QUESTIONS

Outgrower systems can perpetuate inequality within a community through preferentially contracting farmers with high access to resources—a move that cuts transaction and organizational costs.[31] Firms that do work with smallholders sometimes require proof of land tenure, access to labor, and adequate soil quality. As a result, most smallholders involved in outgrower systems are already middle-class, not the poorest of the poor.[32] When poor farmers are included, they often must undergo training before being accepted as full-time contracted members—a time commitment that many cannot afford. Trainings and farmer requirements, however, function as a safeguard to prevent contract default or farmer indebtedness, both of which have higher negative consequences for smallholder welfare. It has been argued that farmers involved in outgrower systems are likely to employ larger numbers of workers, and therefore increase community welfare at-large; however, there is little evidence to support this claim.

Inequality has a number of negative consequences for food security. [33] In this context, rising rural inequality has the potential to raise local food prices to the detriment of the poorest households. [34] To avoid worsening inequality, firms must participate in community outreach and holistic community development.

THE POTENTIAL FOR EXPLOITATION

Ideally, contract farming is a mutually beneficial arrangement. However, an apparently mutually beneficial system can quickly become exploitive due to the monopsonistic relationship between the firm and the farmer.[35] In other words, the firm in a given arrangement has more bargaining power—and as such is more likely to force the farmer into a disadvantageous position—because the firm is the only buyer to which farmers can sell their goods. The firm is then free to lower its buying price the following year, forcing the farmers to accept lower prices. Many firms in outgrower systems follow this pattern, which is termed "agribusiness normalization," or the tendency of firms to invest heavily in inputs, training, and other promotional programs in the first few years to ensure outgrower loyalty, before switching to a more profit-oriented business model.[36]

The practice of agribusiness normalization often breeds dissatisfaction and distrust between farmers and firms; however, if properly informed, growers can still profit after normalization occurs. The most successful farmers in these situations are farmers that dedicate only the minimum amount of land to the contracted crop, while maintaining production of subsistence and other cash crops. This diversification not only allows the farmer another source of income (and food), but it can also serve to increase farmer bargaining power and push up contract prices.[37] Diversification, though, is not always possible, as a firm may relocate or ban intercropping in the contract itself. It is here that both government oversight and contract clarity become essential.

RECOMMENDATIONS

The wide range of practices encompassed by the term 'outgrower system' makes it difficult to come to a single conclusion regarding their impact on smallholder livelihoods. However, if a system follows certain best practices, it is more likely to have a positive impact on its partner communities. Systems that are centralized and have a high capacity for provision of services tend to give farmers more bargaining power and more benefits.

The ideal model for success in terms of farmer and buyer satisfaction depends on the properties of the crop, the needs of the firm and farmers, and the specific country context.

The success of outgrower systems in terms of sustainable economic development and increased smallholder welfare is heavily reliant on how the firm structures the system. Firms should be especially cautious of negative externalities that can result from contract farming—especially those associated with food insecurity—and take specific steps to mitigate such risks, such as encouraging crop rotation and crop diversification.

Profits are always a primary concern for firms, and as such, regulation and oversight are necessary. NGOs, international organizations, or governments can participate in oversight efforts, but smallholders must have some legal recourse in situations that become exploitative. Below is a list of policy recommendations for firms, smallholders, and governments.

For Firms

- *Explicit Terms:* Contracts must explicitly explain the terms of the agreement. Even without malicious intent, vagueness and misunderstandings can damage trust between farmers and buyers, and in some cases cause economic damage to farmers. Terms should never require monocropping.

- *Extension Services and Inputs:* Heightened access to inputs, knowledge, and technology are the biggest benefits that farmers glean from outgrower systems. Systems not only disseminate new technologies to farmers, but also teach farmers how to manage their farms like a business, thus increasing their capacity outside of the contractual framework. The importance of extension services, hands-on management, and input provision imply that firms with the capacity to provide these are most beneficial for smallholders.

- *Community Engagement:* Even when outgrower systems incorporate these recommendations, they can result in increased inequality or negative impacts on food prices. Cooperation with farmers concerning grower management, and engagement with the wider community can lessen the impact of these negative externalities.

- *Transparency:* Transparency about risks and benefits, as well as pricing mechanisms is of utmost importance for creating farmer loyalty and building trust. If a firm is planning to decrease levels of support over time, farmers must be notified so they can invest their earnings accordingly.

For Smallholders

- *Contract Terms:* Farmers should not enter into outgrower systems unless the terms of the contract are both specific and clear. Contracts must delineate quality specifications and quantity requirements, mechanisms for payback of credit, and the consequences of default.

- *Diversifying:* Growing a variety of crops increases the bargaining power of smallholders, but also raises food security in terms of access (through alternative income) and availability. By investing initial increased income from systems in diversification and more land, farmers can to avoid the trap of agribusiness normalization.[38]

- *Formation of Farmer Groups:* By forming and engaging with firms through farmer's groups, farmers can increase their bargaining power, especially in situations where firms are already heavily invested in a particular region. This increases the likelihood that the firm will provide extension services and other beneficial investments.

For Governments

- *Regulation:* In areas where government has the capacity to enforce regulations, governments should develop labor regulations specific to contracted farmers. These should prohibit contract terms that can negatively affect food security, such as monocropping. Forms of exploitation possible under contract farming must be clearly defined and prohibited.

TYPES OF OUTGROWER SYSTEMS

This appendix describes five commonly cited models and the contexts in which they are most applicable.

Informal: The informal model involves annual or seasonal sourcing on an ad hoc or loosely formal basis, and very low levels of firm-to-farmer coordination. Typically employed by smaller firms, buyers enter into agreements with a small number of farmers. Agreements are not always formalized, and farms under contract are generally small. This model works best for crops that require little processing and few inputs, such as fruits or vegetables. It does not require high government capacity to operate.[39] Advantages are low costs and a high level of flexibility. Disadvantages are that there is little buyer investment in financial or technical support, a low level of control over production, and a high risk of contract breach.

Intermediary: The intermediary model is when a smaller private firm uses an intermediary to carry out contracts with smallholders. The intermediary, often a lead farmer or buying agent, then becomes the point person for both farmers and the firm. The intermediary is in charge of managing outgrowers and providing support services. This model can be used with any size farm and is especially effective with farmers' organizations. This model is most appropriate for procurement of staple food crops, like rice, maize, and potatoes, and crops that have a low value-bulk ratio.[40] Advantages are low-risk, better supply chain management than the informal model, and a high level of flexibility. Disadvantages are low visibility between buyer and farmer and low buyer investment in support and technology.

Multipartite: The multipartite model involves a joint venture between two larger entities, often a public private partnership, wherein the buyer sources from farmers' groups but growers are managed and provided inputs through a partner organization. This model implies a high degree of firm-farmer coordination and on-site technical staff. Farms are usually small, and often members of farmers' organizations.[41] Advantages are less cost and investment because of cost-sharing with partner organization, less risk of weather-related issues because of spatial spread of farms, and more technical and input support available to farmers. Disadvantages are higher risk of side-selling and high transport costs.

Centralized: The centralized model pairs a large private firm, usually a processor, with a large number of small, medium, and large-scale farmers. The buyer provides inputs and technical support directly and purchases the crop at the end of the season. Contracts typically have strict quality and quantity requirements, and the relationship between firms and farms requires a high level of coordination. On-site staff are generally available. This model is best suited to crops that require a lot of processing before retail, such as sugarcane, coffee, cotton, or milk. Advantages are high level of control over product, close interaction between firm and farmer prevents side-selling, and provision of support and inputs. Disadvantages are high cost of technical support and post-harvest transport.

Nucleus Estate: The nucleus estate model is when a large firm, typically a processor, operates centralized production while supplementing that production through contracting a large number of small and medium scale farms. The contracts usually involve strict quantity specifications. Nucleus-estate models are typically used when dealing with perennial crops and other crops that display economies of scale. Outgrower systems are especially useful for processors because plants require a steady flow of material for optimal capacity. This model is most appropriate when dealing with perishable crops that have high variations in quality and a high value-bulk ratio.[42] Advantages are simplified farmer support and oversight and control over supply chain. Disadvantages are high production costs, higher crop related risk, geographic constraint in terms of farmer selection, and risk of plantation-like spillover effects.

These categories provide a simple framework in which to organize outgrower systems. However, myriad hybrids exist between the models listed here. Each model can be successful at decreasing farmer vulnerability and improving livelihoods, depending on certain structural elements.

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