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MODELS OF CONTRACT FARMING FOR PRO-POOR GROWTH IN NIGERIA

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1. INTRODUCTION

As growth in the agricultural sector and economic growth in general is on the increase, the actual population in poverty is also growing. This paradox raises the critical question as to whether or not growth in Nigeria is actually pro-poor. In achieving the broad goals of economic growth and poverty reduction in the country the overarching issue is not only to ensure that growth is pro-poor but also it must be sustainable in general and in the agricultural sector in particular. The main challenge now is how to design effective mechanisms and institutional arrangements to alleviate rural poverty and sustain the growth of agriculture. Interestingly, local level institutions are bracing up to the challenge while individuals, groups and enterprises especially within the agribusiness sector are designing various coping mechanisms. These institutions and mechanisms have to be carefully examined for possible lessons and implications for pro-poor growth in the country.

The institutional arrangements linking agribusiness firms (in the organized private sector) and farmers (in the informal sector) can be greatly improved upon and subjected to policy actions capable of re-directing the economy into the path of rapid growth and poverty reduction. These linkages manifest in various forms of contract farming arrangements in the agribusiness sector involving firms and producers of food and non-food crops; but their operations in ways that are supportive of pro-poor growth are yet to be substantiated. And this is the challenge of this study. The specific objectives of the study are threefold: (a) to examine the nature of institutional linkages between small-scale farmers and firms in the Nigerian agribusiness sector. The key institutional issues to be addressed here include the design of contracts and enforcement of contracts, types of enterprises involved and services provided, formal and informal arrangements involved and governance of the relationships, (b) to analyse the impact of the institutional linkages with a view to ascertaining whether or not they are supportive of pro-poor growth especially in terms of investment in agriculture, access to production credit, access to market and farm income; and (c) to determine factors influencing the performance of the contractual relationships.

What is Contract Farming?

Contract farming (CF) is a major agrarian institution that has been widely applied in developed and developing countries at different times for improved coordination and performance of the agricultural market and for addressing different types of market failures in general. Contract farming can be defined as agricultural production carried out according to an agreement between farmers and a buyer which places conditions on the production and marketing of the commodity (Minot, 1986). Such an agreement may be oral or written (Roy, 1972). The explanation of the motives for contract farming has witnessed diverse viewpoints. Allen (1972) considers it as a necessity if the consumer is to benefit fully from modern technologies especially in terms of promoting precise specifications and grades with regard to fruits, vegetables and livestock products. Morrissey (1974), treats contract farming as a way of effecting the transfer of agricultural technology from firms to growers and considers it a good way of improving farming skills. Glover (1984) places emphasis on the credit-facilitating aspect of contract farming as the farmers' principal motive for signing in.

Why is Contract Farming Necessary in Nigerian Agriculture?

The agribusiness sector in Nigeria is beset with myriads of market constraints. The situation has been exacerbated by persistent failures in both input and output markets. The reasons for market failure include imperfect competition, public goods and institutional failure. In Nigeria, imperfect competition in input markets and in the credit market in particular is a major cause of market failure. A market failure in the financial sector has been that private banks have failed to provide appropriate credit and financial services to small and family farms and rural areas. The Nigerian agricultural credit market is beset by several imperfections including market segmentation, covariate risk, scarcity of collateral, information asymmetry and mass illiteracy of clients. The widespread information asymmetry often leads to problems of adverse selection and moral hazard which underpin the reluctance of commercial banks to lend to small-scale farmers. Adverse selection arises when the lenders do not know particular characteristics of borrowers especially in terms of uncertainties about a borrower's preferences for undertaking risky projects. In the case of moral hazard, the main problem is that borrowers' actions are not discernible by lenders. This heightens the risk of default in the sense that individual borrowers may be lax in making efforts to make the project successful or they may change the type of project that they undertake. Market failures with regard to public goods manifest in various forms including lack of rural roads in major agro-ecological zones, grossly underdeveloped agricultural research system and limited use of modern technologies in the crop, livestock and fisheries sub-sectors. Moreover, the extension system is at the verge of collapse with the research-farmers-input-linkage system remaining extremely weak. The major areas of institutional failures include underdevelopment of rural market institutions for credit, labor, insurance and food markets, weak legal institutions and enforcement of contracts, land tenure issues and underdeveloped property rights as well as problems of collective action and development of cooperatives.

The market failures have imposed considerable constraints on input demand and supply as well as the output market. Input demand is affected mainly by low profitability and high risks in farmers' use of purchased inputs and by lack of access to seasonal finance. Profitability and risks in input use are affected by input and output price levels and stability, by the quality of inputs, and by the technical efficiency with which they are used. In the past market liberalisation has led to an increase in input financing difficulties and a decline in input profitability as a result of increases in input prices especially in the face of exchange rate depreciation and reduction in input subsidies. To date, input supply is characterized by high marketing costs, risks and uncertainties. Input selling is not only more risky but also more demanding of capital and knowledge than, for example, retailing of drinks, soaps, stationery etc. which does not require specialist knowledge and can turn over its capital regularly throughout the year. Farm input supply systems face a number of other difficulties associated with quality assurance, promotion, and their impacts on the natural environment. The nature of chemicals and seeds makes it difficult for farmers to gauge their quality at purchase, and they therefore need some form of assurance of the genuine quality of their purchases. The lack of effective varietal registration and certification regulations to protect farmers against purchase of poor quality seed, delays in getting seed approvals and the small size of seed markets present a serious disincentive to private sector seed suppliers. Weak incentives and systems for registering varieties within the national agricultural research system is also a major challenge.

For chemicals, there is a risk of sales of adulterated and/or out-of-date and ineffective stock and there is no regulatory mechanism to address the problem and to ensure that suppliers build up stable relationships and reputations with farmers in their localities. In the case of fertilizer, the market is so segmented in such a way that the farmers do not have access to the input at the right time and at affordable prices. The distribution is always hijacked by political supporters who engage in fertilizer trading for quick money. While the emergency fertilizer distributors derive a lot of money from hoarding and sale at exorbitant prices, farmers do not have opportunities to apply the input in adequate quantities to achieve the desired increase in productivity and profitability. Input suppliers face a further difficulty in contributing towards market expansion and input use, as individuals rarely have funds to do this and they also face a problem from free-riding - if one enterprise invests in promotion of input use, others may enter and share in the benefits of the expanded market. The major constraints on output market are unrelieved supply shortages, poor capital flow, inadequate storage facilities, exorbitant transportation cost and inability and unwillingness of buyers to meet trade credit repayment obligations.

By and large, Nigerian remains a high production-cost country and grossly uncompetitive in international market. High transaction costs in agribusiness operations and the generally high production cost in the country have had adverse consequences on profitability and competitiveness in the agricultural sector (see Olomola, 2007). The linkage between agribusiness firms and farmers at the local level is one of the institutional mechanisms that is apt to serve as remedy if properly articulated and operated effectively. Although the linkage in the form of contract farming has a long history in Nigeria, its role as an instrument for fostering pro-poor growth has not been substantiated and the desired policy context for its widespread application is conspicuously missing in the country. Yet it has been argued that institutional interventions aimed at reducing transaction costs and risks are crucially important for farmers, traders and financiers to invest in smallholder agriculture. And to enhance pro-poor growth policy actions will include promoting strong linkages between farm and off-farm sectors (suppliers, processors), outsourcing of administrative tasks (e.g. partnering for effective management), and establishing longer-term contractual relationships (Olomola, 2006). Besides, the issues of increased investment, better access to markets, higher productivity and income which are associated with linkages between agribusiness and small-scale farmers are quite relevant to economic growth and poverty reduction in the country.

Models of Contract Farming in Nigeria

Different models can be adopted in the implementation of CF schemes. Five broad models of CF have been defined in the literature (Eaton and Shepherd, 2001) depending on the product, the resources of the sponsor and the intensity of the relationship between the farmer and the sponsor. They are centralized model, the nucleus estate model, multipartite model, informal model and the intermediary model. Of the five models only two (centralized and multipartite)
are found to be applied to the selected crops with the exception of tobacco which CF scheme is being implemented following only the centralized model. The crops, their sponsors and the characteristics of the models are presented in Table 1.

Table 1: Characteristics of Contract Farming Models in Respect of the Selected Crops

COMMODITY	MODEL	SPONSOR	CHARACTERISTICS
Cotton	-Centralized - Multipartite	OLAM	-Centralized processor (Olam) buying seed cotton from registered farmers -Involvement of LBAs in the purchase of cotton -Sale of seeds to farmers for planting at subsidized rate of 30% in Gombe, Funtua and Gusau buying zones. -Provision of credit in-kind in the form of cotton seed. -Supply of insecticide (cypermetrin) free of charge for application to about 500 ha. -Provision of cotton extension services including the distribution of cotton seeds to farmers at 15% subsidy.
Ginger	-Centralized - Multipartite	OLAM	-Centralized processor buying ginger from registered farmers -Involvement of LBAs in the purchase of ginger -Identification of farmers -Registration of farmers -Purchase of ginger from farmers
Rice	-Centralized - Multipartite	OLAM	-Centralized rice miller buying rice from farmers -Farmers registered as cooperative group members -Operate through appointed group coordinators -Involvement of Nigerian Agricultural Insurance Corporation (NAIC) -Input supply in the form of credit in-kind -Establishment of model farms to produce good quality seeds for distribution to the farmers and to serve as demonstration plots during field days for training purposes. -Provision of insurance coverage for participating farmers -Specification of variety and quality of rice desired -Purchase of rice from participating farmers
Soybean	-Centralized - Multipartite	NESTLE SLABMARK	-Centralized processor buying soybean from farmers -Link with farmers through government agency (OYSADEP) which is also playing a facilitating role -Provision of seed multiplication services -Input supply in the form of credit in-kind -Monitoring of farmers production from planting to harvesting -provision of shelling services which farmers pay for -provision of cleaning, sieving and physical quality improving services -handling of bagging and weighing -Purchase of soybean from participating

			farmers -Specification of varieties and quality of grains desired
Tobacco	-Centralized	BAT	-Centralized processor buying tobacco from registered farmers -Quota allocation and very tight quality control -provision of inputs as in-kind loan -provision of tractor for ploughing, re-ploughing, ridging and re-ridging, -provision of cash advance for firewood used for curing. -supply tree seedlings (100-300) per farmer each year for the establishment of woodlots -Specification of varieties and quality of grains desired -Purchase of tobacco from participating farmers

Source: Author's compilation

Performance and Impact of Cotton Contract Farming

The assigned responsibility of farmers participating in the cotton contracting farming (CCF) is the production of cotton and transportation to Olam's dump for sale. On the part of Olam, the provision of cotton extension and marketing services is mandatory. The cotton CF has its strengths and weaknesses although it is generally considered a desirable approach for boosting performance of the cotton industry in Nigeria. The strengths manifest in terms of increased cotton production, improved quality of cotton that is capable of meeting international standards and improved knowledge of farmers about modern techniques of cotton production. There are three areas of weakness namely; lack of government encouragement, weak enforcement of agreement with LBAs and unimpressive loan repayment record. The participating farmers have benefited in terms of receiving direct supply of inputs such as seeds, fertilizers, herbicides, plant protection chemicals and spraying equipment, extension services, assured market at prevailing prices as well as improved productivity and profitability.

In terms of both gross margin and net profit, cotton enterprise is profitable in the study area; although the profit level is low. The gross margin and net profit for contract farmers are higher than that of the non-contract farmers. The difference in profitability between the two groups of farmers is, however, not statistically significant. Farmers with smaller household size, less education and limited land available for cotton cultivation are more likely to participate in contract farming. Actual farm size and diversity of crop mix are significantly positively related to the probability of contracting. The results show that per capita income is significantly affected by household size, farm size and participation in the contract farming scheme. Participation in the cotton contract farming scheme has a significantly positive impact on per capita income. The results confirm that contracting raises per capita income by ₦13,328 which is equivalent to 20% of the average income of cotton producers.

Performance and Impact of Ginger Contract Farming

The institutional linkage in respect of ginger has been pronounced in the area of support to ginger farmers through the provision of marketing and extension services by Olam. Basically, the ginger CF is a market-specification contract under which a direct linkage between the farmer and Olam has been established along with quality linked payment system based on actual weights of product. The responsibility of farmers under the contract is to produce ginger, dry, pack in polybags and transport to Olam's warehouse for sale. The transformation of the contract to a resource-providing one is under consideration but no conclusions have been reached. The main strengths are (i) Olam has been able to obtain good quality ginger from farmers, (ii) in view of the fact that marketing transactions are on 'cash and carry' basis, the local farmers seem not to experience any risk arising from their participation in the programme, (iii) there has been a reduction in the sharp practices of middlemen and in the number of middlemen participating in the ginger market. (iv) avoidance of middlemen exploitation since farmers can sell ginger directly to Olam.

The analysis of impact focuses on changes in per capita income of ginger contract farming households compared to their non-contract counterparts and the extent to which CF account for the differences in income between the two groups of ginger farmers. Ginger enterprise in the study area is profitable in terms of both gross margin and net profit. The gross margin and net profit for contract farmers are higher than that of the non-contract farmers. The difference in profitability between the two groups of farmers is statistically significant. The significant predictors of participation in ginger contract farming are age, household size and availability of land. The results show that per capita income is significantly affected by age, household size, farm size and participation in the contract farming scheme. The impact of contracting on per capita income is positive and statistically significant. Contracting raises per capita income by ₦39,656 which is equivalent to 48% of the average income of ginger producers.

Performance and Impact of the Rice Contract Farming

In the case of rice CF, the farmers are to produce rice using the inputs supplied by Olam (as in-kind credit), comply with the farm management practices and ensure prompt repayment of loans through sale of the paddy produced to Olam. On the other hand, Olam is to deliver the required inputs to the farmers at the right time and buy back the paddy after harvest. The strengths seem to outweigh the weaknesses although there is still room for improvement. The rice CF guarantees sustainable supply of raw materials, provides a boost to the rural economy and promote pro-poor growth. However, the rice industry is still beset with the problems of low level of mechanization and use of crude implements

The analysis of impact focuses on changes in per capita income of rice contract farming households compared to their non-contract counterparts and the extent to which CF account for the differences in income between the two groups of rice farmers. The analysis begins with a comparison of some socio-demographic determinants of income as well as productivity and profitability differences between the contract and non-contract rice farmers.

Profitability of the rice enterprise is measured in terms of gross margin (operating profit) and net profit. Judging by these indicators, both the contract and non-contract rice farmers operate profitably. The profit levels realized by the contract farmers are much higher than that of their non-contract counterpart. The difference in profitability between the two groups of farmers however, seems not to be significant in statistical sense. The impact of contracting of rice production on per capita income is positive and statistically significant. The results confirm that contracting raises per capita income by ₦13,957 which is equivalent to 61% of the average income of rice producers across the sample.

Performance and Impact of the Soybean Contract Farming

The soybean CF is a market-specification contract which places emphasis on the quality and price of soybean sold to the processing company. There is also the resource-providing model which (i) guarantees sustainable supply of raw materials to the participating firm, (ii) it is a win-win situation; as both the firm and the participating farmers tend to derive desired benefits. It is seen as cooperation between two willing partners and (iii) it has a potential to contribute to pro-poor growth as many farmers are motivated and mobilized to increase production and benefit from readily available market. Initially farmers were happy for finding market outlet for their product. Indeed, market outlets are now expanding and farmers are even happier. They receive higher income and their ability to repay loans was enhanced. The main threats are the huge financial risk in terms of the amount of funding required and the possibility of poor loan repayment which may likely jeopardize the sustainability of the programme.

The analysis of impact focuses on changes in per capita income of soybean contract farming households compared to their non-contract counterparts and the extent to which CF account for the differences in income between the two groups of soybean farmers. Profitability of the rice enterprise is measured in terms of gross margin (operating profit) and net profit. Judging by these indicators, both the contract and non-contract soybean farmers operate profitably. The profit levels realized by the contract farmers are much higher than that of their non-contract counterparts. However, there is no statistically significant difference in profitability between the two groups of farmers. The impact of contracting of soybean production on per capita income is negative and statistically significant. The results confirm that contracting reduces per capita income by ₦33,968 which is equivalent to 56% of the average income of soybean producers across the sample.

Performance of the Tobacco Contract Farming

The tobacco contract farming is a resource-providing contract which involves an agreement signed between the British American Tobacco Isheyin Agronomy Limited (BATIAL) and individual farmers. The obligation of the farmers under the contract is to produce and sell to BATIAL only good quality flue/air cured tobacco of the quantity and at the grades specified by BATIAL, and comply with all the instructions given by BATIAL in relation to the production and delivery of the tobacco. In its own part BATIAL, as far as practicable, will provide technical support and some of the necessary inputs to the farmer on lease-purchase basis, subject to the farmer’s demonstrated ability to deliver good quality tobacco leaves. The strengths of the tobacco CF lie in its ability to guarantee sustainable supply of raw materials, engender a win-win situation, boost the rural economy and promote pro-poor growth. The weaknesses in the system include the fact that the participating farmers are aging and the difficulty of getting a new generation of farmers, low level of mechanization and frequent agitation by farmers for increases in their product prices. The public campaign against smoking is even a major threat. Nevertheless, the CF has been beneficial to the participants in terms of satisfaction with the progress being made in their farm enterprises, general improvement in standard of living including progress in children education and improved housing condition.

Reasons for Success in the Contract Farming Schemes

Lack of barriers to exit

The success of contract farming schemes can be measured by whether they persist over time implying that both partners are satisfied with the arrangements. Although the crops involved in the contracts are arable and the production season falls within 12 calendar months, the contract farming operations have been on for more than one year in respect of each of the crops. Since the contracts are entered freely and there are no barriers to exit, then persistence of contractual arrangements over time is an indication that the parties to the contract believe they are better off and hence the contracts can be said to be successful. The only exception in this regard is the soybean contract. The pioneer farmers seemed not to be satisfied with the prices paid for their output and the lack of provision of storage and transportation facilities. In the case of tobacco about 80 percent of the farmers who started the contract farming scheme in 2003 continue to remain in the scheme while registration of new participants continues on an annual basis since then.

Positive impact on per capita income

Although if a contract continues over many production seasons, it is reasonable to consider it to be successful, such a definition of success may be too narrow. According to Glover (1990) it is important to move a step further and define success in terms of the continuing viability of the contract and its distributional effects. In this regard, the analysis of profitability of the enterprises (including net profit) for all the crops and the impact of the contract on per capita income in respect of cotton, ginger and rice are quite germane. Positive net profits which are significantly higher for contract farmers than their non-contract counterparts and the fact that their participation in contracts significantly increase the level of income point to the fact that the contracts are successful.

Farming experience
The smallholders included in the contracts are not new to the business of farming. All the contract farmers have had some experience in the production of the crops previously and this is a major qualification for their enlistment into the contract schemes. Entering the contract ensures access to market and seems to define progress in their economic activity rather than something new. Studies elsewhere have also confirmed the importance of previous experience as a major determinant of success in contract farming. According to Glover and Kusterer (1990), producers in Central and South America with previous experience in growing particular crops achieved good contract performance while other growers who lacked such experience, were not so successful. In Indonesia, a ginger contract was successful from an agronomic viewpoint because the type of ginger required was a juvenile form of a type contractors had grown before. With regard to the tobacco contract in Nigeria, the Nigerian Tobacco Company (NTC) started the contract farming scheme about twenty years ago. Some of the farmers participating in the BATIAL scheme were actually inherited from the defunct NTC.

Strong demand for the product
The market environment is essential for the success of a contract. Demands met by the agribusiness firm through contract sourcing need to be both strong and not too volatile if contracts with smallholders are to succeed. Contracts between firms and smallholders have considerable startup costs and a period of low demand for the final product can destroy continuity of a contract as it matures over a number of seasons leading to contract abandonment and losses. With the large population of Nigeria and rapid urbanization, the demand for the commodities has been quite strong both for household consumption (e.g rice) and industrial use (e.g ginger and soybean).

Prevalence of Remunerative Prices
A favourable pricing regime is an important success factor as far as the CF schemes are concerned. This is particularly true in the case of rice and cotton. The prices of both paddy and milled rice have been rising steadily since 2005 implying that the farmers and Olam faced the right price signal for increased production over the years. The increase in the price of milled rice produced by Olam in recent times is even far more encouraging than the farm gate price of paddy. In the case of cotton, the rising prices of the commodities continue to be an incentive for both the farmers and the processing company (Olam) to continue their participation in the cotton CF.

Favourable exchange rate policy
Many farm contracts supply either export or import-competing markets hence volatile exchange rates can lead to difficulties since revenues are earned in one currency while costs are incurred in another. Thus stable exchange rate regimes favor contracting and unstable regimes place contracts at risk. The exchange rate of the naira has been quite stable over the last three years and this is an incentive for investment decisions.

Governance
By and large, the governance mechanisms do affect the success of the contracts with implications for poverty reduction, equity and growth. The contracts that are resource-providing (e.g. cotton, rice, soybean and tobacco) enhance farmers' access to productive inputs and credit facilities thus leading to increased productivity and profitability. And with the observed positive income effect, they have bright prospects for higher growth and poverty reduction. The issue of equity can be viewed in terms of whether or not there is discrimination against any category of farmers on the basis of their social or economic status as well as inclusiveness in critical decisions relating to the governance

of the contract scheme. We found no bias whatsoever in terms of registering participants for the contract schemes. The participating farmers are of diverse age and educational attainment and in general they all fall within the category of small-scale farmers. All that is required is that the farmers should be interested in producing the crops, have previous experience, have access to land for the cultivation of the particular crops in areas where the company wants to operate and willing to comply with the terms of the agreement. Preferably, intending farmers must own the land and be physically present in the village where the crop is expected to be produced. However, one area where the agribusiness firms have domineering power is in terms of quality specification and in determining the prices that will be paid for particular product quality. This is true especially in respect of tobacco and rice. In the case of tobacco, there are multiple grades with price differentials. Farmers have difficulties in interpreting or understanding the grades (especially in view of their low level of education) and have to agree with the judgement of BATIAL officials in arriving at what their products will quality for in terms of grades and prices. In point of fact, the company had to adjust the grade categories periodically to ensure that farmers derive optimum benefit from their participation in the scheme. For instance, in 2003 there were about 19 quality grades of tobacco. The number was reduced to 10 in 2007 and 6 in 2008 on account of the complexity in computing the payments due to individual farmers.

Moreover, the results of the profitability and impact analyses indicate that the governance structures have implications for the performance of CF in terms of its potential to promote growth and reduce poverty. As shown in Tables 2 and 3, the profitability and welfare indicators reveal that the performance of the cotton and rice contract schemes is relatively lower than that of other crops. The ginger CF has the best performance. The varying levels of performance constitute a reflection of differences in governance structures among the three crops. For instance, the cotton CF is only resource-providing whereas that of ginger is only market-specification while the rice CF is both resource-providing and market specification. Without an assured competitive market, cotton farmers are at the mercy of LBAs who pay the farmers much less than what they deserve while the LBAs ensure that they reap considerable gains from their marketing transactions. The implication is that cotton farmers have to maintain direct linkage with Olam to ensure that their products have an assured market in which they are paid fair prices. The arrangement should involve the control of abuse of market power through the regulatory role of government. The lack of control of such power is responsible for the worst performance observed in the case of the rice CF despite the fact that the contract scheme has both resource-providing and market-specification components. The governance mechanisms put in place by Olam place much emphasis on the minimization of the risk of default and thus provides incentives to encourage farmers to sell their products and thus ensure full recovery of the loans advanced at the commencement of planting. In spite of the marketing incentives, the company found it difficult to achieve full recovery and to convince farmers to bring all their output to the company’s factory for sale. The key issue here is the price being offered by Olam. Despite increases in the price from time to time, farmers discovered that the profit margin allowed remains unattractive. The company has to compete with imported rice which sometimes is being encouraged by government’s food security policy. The problem of cheaper rice imports was exacerbated in 2008 by weak US dollar; and this has tended to limit the price increases which Olam could offer to the participating farmers. The government has a role to play in maintaining a stable and favourable policy environment to encourage domestic production and ensure that the small-scale rice producers derive the expected benefits from participating in contract farming schemes.

Table 2
Comparison of Contract Farming Enterprise Profitability in Nigeria

	Tobacco Contract Farming Enterprise	Cotton Contract Farming Enterprise	Rice Contract Farming Enterprise	Ginger Contract Farming Enterprise	Soybean Contract Farming Enterprise
Value of Output (□)	1,119,637.00	184,320.00	123,107.00	579,025	165,188
Variable cost (□)	453,094.20	48,220.00	30,724.00	63,115	46,660
Gross margin per farm (□)	340,316.00	141,113.00	78,779.00	449,628	211,461
Fixed cost (□)	20,981.41	1,719.00	11,349.00	6,618	18,313
Net profit per farm (□)	319,334.60	139,393.00	67,429.00	443,009	193,148
Crop income per capita (□)	60,896.19	24,965.00	16,558.00	93,374	49,288
Gross margin (□/kg)	48.65	35.48	22.07	57.54	90.12
Gross margin (□/ha)	86,678.56	46,892.00	69,589.00	249,545	94,912
Net profit (□/kg)	44.46	34.96	17.93	56.53	76.02
Net profit (□/ha)	80,102.13	46,277.00	59,982.00	244,446	80,976

Source: Author’s computation

Table 3
Ranking of Profitability and Welfare in Contract Farming Households in Nigeria

INDICATORS	**RANKS**				
	Tobacco Contract Farming Enterprise	Cotton Contract Farming Enterprise	Rice Contract Farming Enterprise	Ginger Contract Farming Enterprise	Soybean Contract Farming Enterprise
Gross margin per farm (□)	2	4	5	1	3
Net profit per farm (□)	2	4	5	1	3
Crop income per capita (□)	2	4	5	1	3
Gross margin (□/kg)	3	4	5	2	1
Gross margin (□/ha)	3	5	4	1	2
Net profit (□/kg)	3	4	5	2	1
Net profit (□/ha)	3	5	4	1	2

Source: Author’s computation

The ginger farmers are offered market access and the quality specifications with the associated prices are well understood by the participants. Information about the international market price of ginger is also widely available to the farmers. There is a general belief among the ginger farmers that the market-specification contract arrangement provided by Olam is a better alternative to what the LBAs offer. The price advantages associated with products of high quality is also well known and are being duly extended to qualified producers. This pattern should be sustained and should be applied even to CF arrangements with a combination of both resource-providing and market-specification contracts. Agribusiness firms must weigh the balance between transaction cost reduction and reduction in the price being offered to farmers for their products. If generous incentives are provided with the intention of minimizing contract default and unfair prices are offered to the farmers as their products are being purchased, it will be difficult to achieve full recovery of the credit granted to the farmers in advance of production activities and this may jeopardize the success of the scheme as farmers may tend to disengage or divert their products to spot markets.

Suggestions for Improved Performance of Contract Farming

Suggestions for Improved Cotton Contract Farming

- The recycling of seeds as it is currently being done cannot lead to significant improvement in yield. Most of the cotton seeds in the market are contaminated. Therefore, it will be necessary to make available certified improved seeds in adequate quantity by the government (Federal, State and Local) in conjunction with the National Agricultural Seed Council (NASC). Specifically, the NASC should obtain improved seed varieties from research institutes and distribute to their out-growers for multiplication. The government should provide adequate funds to the NASC to procure seed cotton from the outgrowers on a timely basis. The NASC should assemble seed cotton with proper storage and contract ginners to process them separately to avoid mix-up with other varieties in the market and thus maintain purity. NASC may sell the cotton lint in the open market and derive revenue for further procurement and repeat of the purification process. The NASC can then package the seeds for sale to farmer in suitable locations across the cotton producing zones. This can bring about significant improvement in yield.
- Strict enforcement of quality control is required in order to reduce the problem of product adulteration.
- The granting of procurement advances to LBAs should be stopped forthwith; rather farmers should be empowered through appropriate loan support schemes.
- Cotton-related associations should be made more effective. For instance, decision making should be democratized, views of stakeholders should be sought and obtained as part of the decision making process. Interests of the various groups in the associations should be accommodated. For instance, in the case of National Cotton Association of Nigeria (NACOTAN) which has producers, ginners and exporters of cotton as members the interests of these members should be protected. Finally, there is need to encourage institutional/corporate membership.
- Government should legislate against the use of polypropylene bags for cotton packaging.
- Government should encourage the use of jute bags for bagging seed cotton while cotton lint should be packaged in clothe wrapper.
- There is need for the government to ensure that the suggestions and policy recommendations for improvement often provided by consultants are implemented effectively.
- Pricing of cotton should reflect quality differentials in products. In other words, the cotton of the highest grade should attract the highest prices.
- The government should ensure strict control of movement of seed cotton from one area to another; cotton from across the border moving to the Northwest should be ginned separately and should not be allowed to mix with other varieties. Also seed cotton that moves from Northeast to Northwest or vice versa should be ginned and processed separately without allowing mixture. This is because different varieties are planted in different zones. If the varieties are allowed to mix (e.g. SAMCOT 10 with 11), the resultant variety will have poor performance in terms of yield and other desirable characteristics.
- Government through extension agents, should sensitize and enlighten farmers on the use of weights and measures in cotton business to ensure standardization and avoid cheating and adulteration of products and to prevent discounting of the value of Nigerian cotton in the international market.

Suggestions for Improved Ginger Contract Farming

(i) Olam to have procurement vehicle to collect produce in designated ginger buying centres among the LGAs being covered.

(ii) Designate ginger buying centres centrally located among the producing villages. Group leaders can bring produce to Olam's premises in Kwoi and have transport cost reimbursed.

(iii) Olam should provide drying ground/slabs near the farms or in the alternative provide big tarpaulin for each farmer (at reduced prices) for drying purposes in order to improve the quality of ginger.

(iv) Olam should engage in more enlightenment campaigns by organizing training sessions for farmers in ginger producing zones to promote the production of high quality ginger. By so doing, farmers who have not yet registered will be attracted and thus imbibe the idea of producing clean (and unadulterated) ginger.

(v) Olam should stop giving cash advances to LBAs to buy ginger in order to sanitize the ginger market.

(vi) To eliminate the middlemen and their unwholesome practices, Olam should bring the matter to the ethnic group leaders and traditional rulers in the ginger producing villages so that the bad practices will be exposed, discussed and nipped in the bud. This will be possible and effective since the community leaders and traditional rulers in the villages are themselves farmers who are likely to benefit from the elimination of the anti-competitive practices of the middlemen. When such meetings are convened, it should be necessary to ensure that representatives of Olam, ADP and extension agents in the area are in attendance. Through moral suasion, it should be possible at such meetings to prevail on the middlemen to desist from the adulteration of ginger, stop controlling ginger prices and abide by the ginger quality improvement techniques being taught by Olam.

(vii) There is need for Olam to do proper investigation of the background of those to be appointed LBAs. Currently about 50 percent of LBAs are performing below expectation. They have supplied far less than the quantity of ginger expected from them; and a lot of money remains outstanding. This is a major source of risk for Olam's ginger business in the NW. Unfortunately, even if Olam wants to obtain the amount due through litigation, the end is unlikely to justify the means. Specifically, Olam's investigation should cover issues such as (i) the maximum quantity of ginger the intending LBA has ever purchased, (ii) whether or not purchases were made in cash or on credit, (iii) the quantity of ginger the LBA can purchase using his own financial resources. It is on the basis of information on these points that Olam will be in a better position to determine the amount of cash advance that can be provided for a potential LBA. Currently, the LBAs appointed by Olam were previously operating as middlemen in the local ginger markets around Kwoi. Before their appointment, some of them had never handled the amount of money close to the advance provided by Olam. The management of such funds has therefore, been a problem and the tendency for diversion has been very high.

(viii) Reduction of Transportation Cost and Expansion of Supply Base. To increase its direct share of the ginger market and encourage farmers to have direct access Olam can designate some villages in the ginger producing zone as buying centres where farmers can take their ginger for sale. Olam can acquire and dispatch suitable number of procurement vehicles to transport ginger from such centres to the warehouse at the processing unit in Kwoi. Alternatively, group leaders can bring ginger deposited by their group members at such centrally located buying centres to the processing unit in Kwoi and have their transportation cost reimbursed by Olam. In this case there may be no need for Olam to acquire procurement vehicles.

Suggestions for Improved Rice Contract Farming

- There is need for some farmers to relocate their farms from deep swampy areas that are prone to flooding to shallow swampy areas.
- There is need for timeliness of input supply by Olam

- There is need for education of farmers on proper use of farm inputs (especially pesticides and herbicides) which have been misused by some farmers in the past leading to considerable loss of output.
- Farmers need to report problems identified to Olam on a timely basis.

Suggestions for Improved Soybean Contract Farming

- Decentralization of sales point from the headquarters of the contracting firm to zonal offices or sales points nearer to the farmers to minimize transportation cost.
- Payments for the commodities sold to the firm by farmers should be paid for promptly to motivate the farmers and sustain their interest in the scheme. In the past farmers experienced delays in payment up to three months.
- Contracting firm should provide financial support to the farmers in the form of credit in-kind to boost production and expand their earning potentials.

Suggestions for Improved Tobacco Contract Farming

- Remunerative pricing
- Reduction in quality grades for the purpose of pricing
- Corporate social responsibility (especially scholarship awards to farmers' children) of BATIAL to be more widely felt by participating farmers

In addition to the above contract-specific suggestions, government at various levels in the country should pay attention to the following recommendations in order to enhance the performance of contract farming in the country.

(a) Involve agribusiness firms in input distribution
(b) Promote training and capacity building
(c) Establish quality control units in various agro-ecological zones
(d) Ensure effective implementation of the Export Expansion Grant Scheme (EEGS)
(e) Ensure quick dispensation of justice.
(f) Promote commercial agriculture through appropriate contract farming models
(g) Promote domestic production of fertilizer
(h) Overhaul the agricultural credit system to ensure farmers have increased access to production loans.
(i) Develop downstream agriculture through partnership with agribusiness firms
(j) Develop rural infrastructure

Conclusions

Contract farming in Nigeria is becoming an important institutional framework for agricultural transformation and modernization. The institutional linkage between agribusiness firms and smallholder farmers in the country is moving towards a win-win situation as far as contract farming arrangements for cotton, ginger, rice, soybean and tobacco are concerned. Contract farming develops in response to the critical resource constraints faced by farmers, the need to raise the quality of the concerned commodities and address the technical difficulty associated with the production of some of the crops (e.g tobacco, rice and cotton), the business specialty and reputation of the contractors and the requirements of the export market. As part of the CF arrangements, agribusiness firms provide technical assistance, specialized inputs and credit both in kind and cash. With appropriate governance structures and improved risk management it has been possible to tackle the constraints to a reasonable degree.

It is found that contract farming in respect of the various commodities is basically resource-providing and market specification in nature while operationally it is characterized by centralized and multi-partite models. The major benefits of contract farming to farmers are improvement in productivity and profitability, improved access to markets, better product quality and enhanced access to fixed assets. On the part of participating firms, the linkage has resulted in sustainable supply of raw materials of higher quality, better international market access and less complicated marketing chain. Nonetheless, there are a number of constraints on the performance of the contract farming system including high cost of transportation, anti- competitive practices of the middlemen especially in the case of ginger, product adulteration (in the case of cotton), inadequate supply of modern inputs and poor culture of loan repayment among farmers. The observed institutional linkages are supportive of pro-poor growth. The farmers are operating profitably and rising profitability over and above what is possible among non-contract farmers is a major driver towards improved welfare. To improve the situation there is need to involve ethnic group leaders and traditional rulers in resolving lingering conflicts, introduce training and capacity building incentives into the contract farming schemes to enhance productivity, product quality and loan repayment. Moreover, the government should sensitize and enlighten farmers on the use of weights and measures in agribusiness to ensure standardization and avoid cheating and adulteration of products; and the entire system must be guided by appropriate legislative framework. Such legislation should encourage agribusiness firms to initiate new contracts in various parts of the country, provide support to smallholders to make them operate profitably through payment of fair prices and ensure that the firms do not abuse their market power.

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