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## REVIEW ARTICLE

# The Importance of Contract Farming to Small-scale Farmers in Africa and the Implications for Policy: A Review Scenario

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### Abstract:

#### Introduction:

Contract Farming (CF) has been largely believed to have the ability to promote the chances of Small-scale Farmers (SSFs) from less developed nations to participate in intensive agricultural production and lucrative export markets, thereby integrating them into the latest way of doing agri-business.

#### Problem statement:

A perennial issue of SSFs in Africa is a subsistence agricultural productivity due to lack of proper markets, credits and technology in recent years, aggravated by unstable prices of energy and food and lately by the global financial crisis.

#### Methodology:

The study is purely qualitative in nature, making use of secondary data (literature from journals, working papers, unpublished theses and other publications was analysed). The study reviewed CF definitions, the origins, evolution, models on CF, SSFs and CF, objectives, policy-issues and implications to conclusions and recommendations.

#### Results:

The study has shown that adjustments in agri-food systems globally are producing an increased new interest in CF as a supply-chain governance strategy. It has been established that small and medium size farmers in Africa are suppressed by market bottlenecks or unfairness, for example, restricted access to loan facilities, insurance and specialised agri-inputs at above-average costs.

#### Conclusion:

Government and the private sector must formulate contractual laws that will govern agricultural production and marketing agreements between agri-businesses and farmers in addition to establishing and strengthening contract-enforcing institutions to protect both parties contract from any contractual problems, for example, side marketing. Contract Farming brings out the best outcomes for farmers when they have sufficient bargaining power to negotiate the terms of the contract.

**Keywords:** Contract farming, Exploitation, Small scale farmers, Agricultural marketing, Low productivity, Rural poverty.

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## 1. INTRODUCTION

Agricultural production is a huge factor in Africa's economy. However, in spite of agriculture's great potential to enhance national development and poverty eradication, African communities are persistently recording dismal agricultural

performance. Evidence suggests that the continent has continued to lose out on global markets since the late 1980s. Owing to inhibiting trade rules restricting African farmers' access to marketplaces amongst other factors, the continent's contribution to trade in agriculture globally has dropped by ninety percent in major exports. Contract Farming may connect farmers to markets, thereby increasing agricultural productivity across the world. It has the great ability to bridge the gap formed when governments liberalised without warranting access to basic farming requirements including technologies,

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credit, and inputs along with other essential services.

Contract Farming is believed by the majority of authors to be a positive progress for agricultural revolution in developing countries, improving the chances of farmers in regional and international markets [1, 2]. However, the question is whether SSFs benefit at all from these activities/arrangements, because the power of buyers may result in an unequal power relationship, which influences the terms of the activities/arrangements [3, 4].

The insatiable need for new, exotic and out-of-season agricultural products in developed countries together with globalisation and market liberalisation give new opportunities for the export of agriculture goods in Africa. Unfortunately, African SSFs, in most cases, do not take advantage of these opportunities because of the following impediments:

(1) There are a lot of information irregularities between farmers and prospective buyers, resulting in sub-optimal results. Agricultural markets are considered to be very risky and frequently weak in Africa and farmers' potential to increase productivity and income is often inhibited by the deficiency of information about efficient agricultural production technologies and market opportunities.

(2) Restricted or no access to loan facilities due to nonexistence of indemnity and the high interest rates applied.

(3) SSFs are usually more opposed to taking risks. While there is competition from producers who have embraced new and ultimately more productive technologies, they are found not to make changes in new technologies themselves because of high risks and costs involved. Instead, they would rather apportion their limited supplies to the production of subsistence crops in order to have the security of food supplies [5].

Contract Farming has become a prominent agricultural issue in most developing nations. Forces of change, such as globalisation, "industrialisation" of the agricultural sector and market reforms have paved the way to CF in many emerging countries and more so in Africa. Contract Farming is gradually changing the face of small-scale agriculture in Africa and has become a new potential to put enthusiasm in developing global agriculture. However, as observed in a study [3], there are still some huge concerns as to whether SSFs will be able to benefit from CF while buying companies may often be a single large company or at most few large companies, a usual case of monopsony. A monopsonist is a single buyer, just as a monopolist is a single seller or producer [3]. Monopsony power arises because a monopsonistic power can also develop when there is more than one buyer [3]. This situation is called oligopsony. Characteristically, there may be a few large buyers in an oligopsonistic market, where each has some point of monopsonistic power [3].

In economic theory, monopsonistic manipulation is defined as the difference between the price of a factor of production and its marginal revenue product that arises from a less than perfectly elastic supply curve for the factor of production [3]. The price the farmer is paid depends on their supply curve [3].

Scholarly literature is divided on how CF influences operations of SSFs in Africa. Small-scale Farmers are the

mainstay of agriculture activities on the African continent. Spencer [6] estimated that 90% of all agricultural production in Africa originated from the output of SSFs. One line of thought which emerges from empirical evidence in certain literature suggests that CF may increase/improve farmer productivity, shrink production risk and transaction costs and promote farmer incomes among many other benefits [1, 5, 7 - 9].

Contract Farming has been widely performed in many countries, including developed ones, for example, the United States of America, as its benefits outweigh the undesirable effects. It has a long chronicle in developed countries and is continuously gaining distinction and importance in developing countries as well [1]. Governments are progressively stressing it in their policies for similar reasons, that is, encouraging commercialisation of SSFs and overall agriculture production [10]. In Latin America, for example, CF has enlarged high acknowledgement during the import replacement industrialisation phase as a mechanism to organise maintainable supply of raw materials [6]. This exercise is continually being scaled up [11]. Comparable developments are happening in Asia and Africa mainly, with export products such as horticulture, tree crops (avocadoes, mangoes and macadamia nuts, as an example) and poultry [9].

On the other hand, Glover a study [12] pointed out that CF is an extended form of manipulation with limited influence, and widens socio-economic differences. Sriboonchitta and Wiboonponge [13] found out that farmers in Thailand initially dreamt of stable incomes only to realise that CF led them into debt as they struggle to meet the requirements of the contracts drafted with craftiness of enterprising firms. In Kenya, though contracted farmers earned higher income than their counterparts, Wainaina *et al.* [14] found out that the farmers recognised that they were being used by large agribusiness firms as they are subjected to covering both investment and the losses. The same view was held by Ton *et al.*, [15] though they acknowledged that if appropriately administered, mutual benefits for agribusiness companies and the farmer can be realised in CF. Nhene [16] posits that Africa's agriculture, along with its +80 million SSFs, is up for sale to the highest bidders in the form of multi-national companies. This, he argues, has been achieved through CF by taking over huge tracts of agricultural land bought, and brought their own patented seed and agricultural inputs. Clapp [17], in his convincing assessment of CF, views the contract as a bafflement of an unequal power relationship through which the company controls the farmer. Contract Farming is usually a deal between a company, which is both a monopoly seller of its final product and a monopsony buyer of inputs, and a farmer [17]. This unequal power relationship leads to the exploitation, disguised proletarianisation, loss of independence and subservience of farmers [1].

Some authors and institutions regard CF as a means of manipulation of farmers by agribusiness due to imbalanced power relations [18]. Others deem it as a risk for food and nutrition security as well as a cause of environmental dilapidation because through CF, the cultivation of cash crops with high use of crop and livestock chemicals is promoted [9, 19].

Discouraging against the use of CF as a modest model for agricultural development, [12] a study discusses that market distortions (most frequently monopsony), the overriding goal of profit maximisation and weak bargaining position of growers, all contribute to serious complications for SSFs in CF, including the possibility of manipulation and cheating by companies. In an otherwise theoretically exhaustive study of vertical integration focusing on CF, another study by [20] also associated monopsony with brokering power. He alludes that, it is true that a contract is a discussion between unequal, economically powerful agro-business and rather weaker SSFs and if the integrator has gained monopsony position, he could abuse his position to breach contract requirements in his favour. Eaton and Shepherd's [1] practical guide to CF also warns of funding companies ill-using a cartel position and, therefore, the need to shelter farmers. They recognise that there is potential for CF in promoting agricultural production and marketing, but believe that it is essentially an agreement between unequal parties.

**2. PROBLEM STATEMENT**

Globally, there are over 400 million SSFs, of which 80 million are in Africa. The productivity of African SSFs is restrained by numerous factors. First, this class of farmers is restrained by the lack of requisite finance coupled with inability to access credit facilities, as they often do not have collateral. This emanates from their lack of own tenure/title deeds to their lands. Second, in Africa, SSFs have challenges in accessing information relating to methods of production and access to markets. This is especially true for those dealing in new crops and varieties. Third, SSFs in Africa tend to be more risk averse as they operate near subsistence, being satisfied with what is enough for their immediate use, compared to larger farmers who often seek to operate at a corporate level with an enterprising mind-set. Fourth, subsistence farming makes the SSFs to seek a minimum supply of food prior to expansion into commercial production for an uncertain market. Fifth, there is limited education and training on how to go about farming for SSFs, especially, when it comes to the safety on the use of agricultural chemicals and equipment.

Contract Farming has been considered controversial as it has been subjected to criticism and much debate. Parties in favour of CF view it as a solution to various challenges likely to be met by SSFs including access to technical and up to date farming information, loan facility and market risk, the characteristic features of commercial production. This view supports the idea that CF facilitates the integration of SSFs into commercial agriculture, which may be useful for improving income growth, thereby helping to alleviate poverty. In contrast, critics of CF view it as a means for enriching large

firms as they may benefit from the land and poverty of SSFs. This view implies that these firms effectively pay the farmers way below minimum wages, while "taking control" of their farms. As such, integrating SSFs into profitmaking agriculture is seen as a retrogressive trend which leads to greater risk, income inequality and indebtedness [5, 9]. In their study of CF in Africa [21], they discussed the hardships that are faced by SSFs who engage in Contract Farming. Their evaluation shows negative results at current asymmetries of power whereby, through a highly unequal power relationship, contract farmers are demoted to the status of hired hands. Companies are seen to be engaged in manipulation of contracts and farmers turn to self-exploitation through extended working hours and using children as labourers [22].

**3. METHODOLOGY**

This research review is essentially a qualitative approach and is based primarily on literature review from secondary data sources. It is concerned with and verifiable by both observation and experience rather than theory or pure logic. The qualitative method used here is mainly meant to gather non-numerical data and find meanings, opinions, or the underlying reasons from its subjects. In order to understand what is already known about CF, SSFs in Africa and policy issues, literature will be drawn from journals, working papers, unpublished theses, as well as publications from the global agri-business industry and government documents drawn from the African continent and other developing continents, for example, Asia and South America (for purposes of comparison).

The underpinning issues upon which this paper is based on, include the availability of evidence on the performance of CF in Africa, challenges faced by both SSFs and agricultural industries that sponsor and support CF and policy considerations in the large body of the study. This paper defines CF and reviews literature on the theoretical perspectives, models, evolution, and implications on CF. The subsequent sections analyse the state of SSFs in Africa. The paper places emphasis on what should be done to ensure that SSFs benefit from CF, given that CF has become a prominent issue in African agriculture. Finally, the paper presents conclusions and recommendations.

**4. LITERATURE REVIEW**

**4.1. Definition of Contract Farming**

As CF is now carried out in many countries (developed and developing), it is, therefore, imperative that this paper intensively examines many definitions of CF as possible. Literature contains numerous definitions of CF; below (Table 1) are definitions which fit in this review:

**Table 1. Definitions of contract farming.**

a) CF can be comprehended as a company giving/lending agricultural "inputs" such as planting seed, fertiliser, pesticides, credit or extension services to a farmer in trade for exclusive buying rights over the specified agricultural produce [23].
b) A legal contract between a company (contractor) and farmer (contractee) for a forward production of a produce with well stated requirement and payment model which details product expectations such as volume, quality and timing of delivery [24].

*(Table 1) contd....*

c) A medium of operation, whereby the methods of transaction are formulated between/among parties by legitimately enforceable, obligatory agreement. The precise requirements can be as comprehensive as possible, including items such as production technology, pricing, risk distribution and other product and transaction issues [25].
d) Farming production contract 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/pledges to purchasing it at an agreed price [26].
e) A predetermined arrangement between farmers and other (buying) companies, whether oral or written, indicating one or more settings of production and/or marketing of an agricultural product (crop or livestock) [27].
f) A legal agreement between farmers and other companies, this can either be written or oral detailing one or more requirements production and marketing, for agricultural product which is not transferrable [28].
g) The definition by [8] refers to CF as an arrangement when growers and buyers/processors engage in vertical coordination thereby directly shaping production decisions due to contractual specifications of market commitments (by quality, volume and, at times advanced price determinations); provide specific agricultural inputs; and, at times advanced price production ( <i>i.e.</i> a partition of management functions between contractor and contractee) appears to be more elaborative.
h) Clapp [17], goes a step further to highlight that CF includes four elements namely prior agreed price, quality, quantity or hectareage (minimum/maximum), and time of delivery. The same author goes on to highlight that contracts could be of three types: (i) purchasing contracts under which only sale and purchase conditions are specified; (ii) restricted contracts in which the contracting company supplies only some of the inputs and prices for the agricultural produce are pre-arranged and (iii) total contracts wherein all the inputs are supplied and managed by the contracting company while the farmer only supplies land and labour.
i) A formal definition used in [29] referred to CF as an agreement between a farmer and a purchaser founded in advance of the growing season for a specific quantity, quality and date of delivery of agricultural output at a price or price formula fixed in advance. This definition is quite clear and unsophisticated, but does not provide much information about the company purchasing the product.
j) Singh [9] defines CF as a procedure for the production and supply of agricultural produce under forward contracts, the crux of such contracts/arrangements being a commitment to deliver an agricultural commodity of a type, at a time and a price, and in the quantity required by a known buyer. Such agreements can be either written or verbal, detailing the production or marketing conditions. On the other hand, he continues, CF permits agribusiness an undeniable degree of jurisdiction over production and marketing without possessing a farm which gives them the opportunity to ensure the availability of supply at required quality, quantity and time. On the other hand, the contract can solve the critical problem of farmers – especially small-scale – to access inputs, credits and extension services. Therefore, thanks to CF, both parties can fulfill requirements while minimising transaction risks and costs.
k) Eaton and Shepherd [1] clearly state three main components or areas of pledge in a CF arrangement: (i) Market Provision – the farmer and the contractor promise themselves respectively to supplying and purchasing a specific agricultural commodity; (ii) Resource Provision – the buyer commits to provide inputs on loan and technical and extension services to the farmer; and (iii) Management Specification – the farmer accepts to abide by the prescribed production practices, input recommendations and cultivation and harvesting methods.

Source: [1, 8, 9, 17, 23 - 29].

Therefore, building on the above definitions, CF can be boldly described as: A contractual arrangement/agreement between a farmer (producer) and a company (buyer), whether oral or written or any format, which provides resources and/or specifies one or more conditions of production, in addition to one or more marketing conditions, for an agricultural product, which is non-transferable or which cannot be side marketed; or, taking Porter and Phillips-Howard's [23] understanding of CF, it can be defined as: A legal agreement for a set period between a producer and a buying company, agreed verbally or in writing before production begins, which offers material (agricultural inputs) or economic resources to the farmer and postulates one or more product or process requirements for agricultural production on land owned or controlled by the farmer which gives the company legal title to (most of) the crop or livestock.

Hamilton [30], gives more focal points/components of CF, which are not included in the above definitions: (1) that the arrangement is for a fixed term, for example, seasonal; (2) that the contract is signed or entered into before production begins; (3) that the contract demands for production of a crop (or the rearing of animals) on land owned or controlled by the producer; (4) that the producer generally has no legal title to the crop or livestock; (5) that in legal language, the producer is often an independent contractee rather than an employee or partner of the company, or in a joint venture. These components should be included as part of the definitions.

However, one should note that contractual arrangements

are heterogeneous, and vary according to many dimensions. For instance [31], a study supports this particularly noting how CF arrangements differ across cultures. The same author highlights that increasing diversity in contracting organisations, type of contracts, crops, the type of farmers and the socio-economic atmosphere can help enhance contractual arrangements. Hamilton [31] also underscores that it is only feasible to emphasise a specific situation than the generic foundation of CF. In this regard, any attempt to analyse the nature of CF should consider this heterogeneity in CF arrangements.

Despite variations in how CF is defined by authors, its essential implication is, basically, the same. From synthesis of various definitions by these authors, CF can simply be contemplated as a partnership or arrangement between agribusiness companies and farmers (SSFs in this paper). Glover and Kusteres [32] define CF as: Those contractual arrangements between farmers and other companies, whether oral or written, in which non-transferrable contracts specify one or more situations of selling and production.

#### 4.2. Evolution of Contract Farming

According to Eaton and Shepherd [1] CF has been around and operational for a long time as a way to organise the cash crop/livestock production for both small and large-scale farmers. It dates back to the ancient Greece where certain percentages of particular farmers' products were paid as tithes, rents and debts [1]. The Greeks called this agricultural model

“hektemoroi” or sixth partners. Eaton and Shepherd [1], however, recorded that China also, in the first century, recorded some form of sharecropping which was similar in approach to the modern CF.

In the United States of America (USA), the tradition of CF can be traced back to the 19<sup>th</sup> Century where it was used for the growing and processing of sugar beets [20, 25, 33]. Furthermore [8], a study showed that CF was used in the food and fibre industries in the USA between 1930 and 1950 and it expanded to the fruit and vegetable canning sectors of Britain, Australia, Canada, France and Holland. Watts [34] also observed that Mexicans, by the late 1950's, progressively supplied the American markets with fruits and vegetables under CF arrangements.

Globally, agriculture has grown/developed exponentially since the dawn of globalisation and industrialisation. The global desire for an assortment of varieties of food has been aggravated by the global requirement for the year-round fresh supply of the same food [35]. It can be noted that before getting independence from colonial powers, foreign-owned crop plantations in South American and Asian countries produced agricultural goods that have global demands. The end of the colonial era witnessed a number of these plantations disintegrated as the foreign related agribusinesses which were subjected to domestic political uncertainty and naturalisation [36]. To meet global agricultural demand, the agribusiness companies had to change their strategy of operation and securing agricultural products [36]. Today, the success of any agribusiness company is dependent on its successful vertical integration into food supply chains [37].

According to a study [38], CF has become the practice that agribusiness companies have embarked on to successfully integrate themselves into the food supply chain. This comprises the loaning of agricultural inputs such as fertilisers, seeds and pesticides to farmers, with the understanding that the farmer will pay back when he markets his products [23, 39 - 44].

Contract Farming, as an organisational structure in agriculture, has a long history dating back to the 20<sup>th</sup> century [38], when these agreements/arrangements were used to procure sugar and cotton in the USA and had spread to Western Europe by late 20<sup>th</sup> century [35]. Given its ancient success, CF has been present for many years and has become an orthodox feature of commercial agricultural production in developed countries [45].

Little and Watts [8] pointed out that the later years of the nineteenth century witnessed Japan utilising CF in Taiwan, a similar practice which the USA businesses did to Central America in the earlier years of the twentieth century. Prowse [46] noted that CF became a useful tool in the USA for vegetable production, in Europe for the crop seed industry prior to World War 2 and in the USA following the World War 2. Weatherspoon *et al.* [47] maintained that CF became widely spread in the 1960s following the commencement of official contract agreements or arrangements among input suppliers and food processing companies in industrialised nations.

Agriculture in Africa, in contrast, is characterised by low productivity, poor quality and under-utilisation of arable land.

On the one hand, the responsibility that CF can function in improving agricultural productivity of the general rural population has received considerable attention; CF in the African context is seen as a mechanism to alleviate poverty because it has potential to raise the income of the SSFs [48]. On the other hand, Warning and Key [48] argue that some research studies have criticised CF because of its exploitative nature; a perception created by the large number of SSFs recorded to obtain unfavourable and non-lucrative contract terms forcefully.

Kirstein and Sartorius [8, 35] noted the introduction of CF in Africa in the period 1930–50, particularly in the horticulture canning sectors, and later rapidly increased in the period 1975–85, with more than sixty schemes operating in sixteen countries. Jacobson [49] noted that changes were observed in the African perception of agriculture, while the development agenda exhibited new fashion which encompassed market led growth and increased exports and thus CF was implemented to transform the rural sector in Africa. Ever since the 1980s, CF has become a crucial issue in African agriculture and has been deemed a poverty reduction tool supported by the World Bank (WB) and Food and Agricultural Organisation (FAO).

The adoption of monetary reforms amid increasing market failures was attributed to the later rapid escalation in the practice of CF in the 1980s in Africa. Consequently, economic liberalisation and institutional reforms reduced and redefined government interference in service provision, leaving the onus with private players who were expected to produce and market products of SSFs [50]. Swinnen and Maertens [51] argued that this resulted in the reduction of supply of inputs and credit facilities for farmers due to the disruption in the working of numerous government regulated agriculture establishments, cooperative unions and parastatals processing companies. In Kenya, for example, the economic reforms led to the downfall of key entities including the Cotton Lint and Seed Marketing Board, the National Cereals and Produce Marketing Board, and the Kenya Grain Growers Cooperative Union [52]. Kherallah *et al* [53] argued that the fundamental foundation of agricultural market reform was that, improving the incentive structure for SSFs (in the form of higher prices and well-functioning markets) would produce a positive supply response, snowballing both agricultural output and income levels. For SSFs in many African countries, reform means the removal of government subsidies for credit and inputs, a move that led to very poor agricultural production and activity. Therefore, with the advent of economic liberalisation, privatisation and institutional reforms, there was the fall of state controlled vertical coordination and the emergence of private sector vertical synchronisation [54].

Swinnen and Maertens [51] pointed out that private sector vertical coordination is influenced by the mixture of the increase in demand for high quality products along with safety standards and rising individual revenues and demand (both internally and through export trade). The other reason is the inability of farms to reliably supply required products in a regular manner and timeously to manufacturers/processors and trade owing to various imperfections of the market and poor public infrastructure. It should be noted that, while in the

developed countries private sector vertical coordination is being largely driven by an increase in consumer need for separated agricultural products like seafood, fresh meat, fruits and vegetables [35], and insistence of organic food by consumers, in the developing countries, private sector vertical coordination was driven by market distortions [54].

The reason behind this variation in the drivers of private sector vertical coordination between developing and developed nations has been observed in a study [35] as influenced by certain forces and constraints, and as a result, there are, therefore, differing formal arrangements evolving in developing countries, different from those in developed countries.

#### 4.3. History of Contract Farming and Extent

There has been invention over the last 100 plus years regarding the contracts between companies and farmers with tenure by the latter over their own land [20]. For example [34], a study draws attention to how the Japanese utilised CF in Taiwan in the last decades of the nineteenth century, and the USA companies followed suit in Central America in the early decades of the twentieth century (Table 2).

In Southeast and South Asia, CF has also swiftly swelled in recent years [56]. For instance, since 1956 the Indonesian government has endorsed CF through the Federal Land Development Agency (FELDA) with a lot of accomplishment [28]. In Malaysia, CF is also extensive, mainly based on state-promoted out-grower schemes [58].

In Africa, CF is definitely on an upward trend. It is noted that though in the late 1980s many CF arrangements had full or partial government ownership (with the public sector owning

some of the largest projects) [8], most CF agreements/arrangements are now originated by the private sector. For example [56], indicated that in Mozambique, almost twelve percent of the rural population is following the CF (with all cotton grown through contracts).

It is reasonable to say that the private sector is now the main force in CF in developing countries, for example, in 2008, Nestle (Private) Limited had contracts with more than half a million farmers in over eighty developing and transitional economies. Olam from Singapore contracts with around 200 000 farmers in over fifty countries to supply seventeen agricultural commodities; Unilever sources over sixty percent of its raw materials from approximately 100 000 small and large farms in developing countries (as well as third party supplies); and Carrefour (France) contracts with farmers in eighteen developing countries [58].

#### 4.4. Types of Contracts

According to Smalley [62], farming contracts safeguard the growing and production of the right products at the appropriate and agreed time and place. They also ensure that there are inducements for all parties to coordinate, and those inducements are provided at the lowest possible costs. In order to accomplish this, contracts consist of terms designed to overcome particular market failures and distribute risk and control differently among contract participants.

Please note that the CF models discussed later in this paper operate under different agreements of contract types that are not mutually exclusive. Scholars [1, 5, 21] have illustrated three types of widely used contracts (Table 3): Market Specification contract, Production-management contract and Resource-providing contract:

**Table 2. World contract farming contribution and extent.**

Country/ies	CF Contribution to Agricultural Output (%)	Commodities Under CF
Developed Countries	15	Various agriculture products e.g. soya beans cotton, maize, rice sugar, beef, poultry, flowers
USA	39	Beef, cotton, soya beans, poultry, pigs, dairy, fruit
Germany	38	Dairy, poultry, sugarcane, cut flowers
Transitional Economies (Czech Republic, Slovakia and Hungary)	60-85	Dairy products, fisheries, poultry, pigs
South & Central America	65	Bananas, barley, horticulture, wheat, beef, poultry, pigs
Georgia, Moldova, Ukraine and Russia	75	Food production (poultry, pigs, dairy)
Vietnam	80	Cotton and fresh milk Rice and tea
India	80	poultry and dairy products, potatoes, rice and spinach
China	75	Cotton, tobacco, beans, poultry, fish
Kenya	50	Tea, sugarcane, horticulture
Mozambique	30	Cotton

Source: [29, 53, 55 - 61]

**Table 3. Type of contract farming models.**

a) <i>Market-specification Contracts</i> . As the phrase says, they indicate quality, price and timing with least or non-provision of inputs. Producers are in have the responsibility of most of the decisions to be made in production. As a consequence, they endure most of the risk. Nonetheless, it produces meaningful rewards for both contracting parties by permitting market data flows between them. Alternatively, these contracts feed the producer demand-side information related to consumers' taste, crop variety, quality, quantity, timing and price. On the other hand, the buyer will be able to approach material related to supply conditions. Such contracts are mostly used in casual or unofficial models of CF. This is a pre-harvest arrangement between the farmer and the company indicating time and location of sale, as well as the quality of the product. Market-specification reduces information and coordination costs, which are particularly important for perishable, export markets or new markets.
b) <i>Production-management Contracts</i> . Includes higher levels of proficiency than the other two types of contracts and the buyer makes pronouncement over production and harvest. In this contract, the buyer provides technical guidelines on the production process. Contract stipulations vary, based on the local context, the type of product and problem faced. Still, to augment the benefit of any type of contract it is important to give eloquence to the implications of revenues, costs and risks for both parties involved, to prepare clear and detailed contracts with enforcement mechanisms and last but not least, to develop a conjoint commitment of both parties.
c) <i>Resource-providing Agreement</i> . This contract usually specifies that buyers will offer inputs and extension services at different stages of production to producers on loan. The inputs and extension services will have to be paid for when the crop is sold. The contract might give a certain level of decision-making power to each party at different stages and the risks are also allocated appropriately. For farmers, this type of contract eases the risk of coordination because inputs, credit and extension services are provided for. In turn, the buyer profits from lower selling prices and reliable supplies of required quality and quantity at the time. This kind of contract is generally used by entrenched businesspersons in informal and centralised models of CF.

Source: [1, 5, 21]

#### 4.5. Contract Farming Framework

Contract Farming is progressively becoming a fundamental part of a successful agri-business [1]. To a huge degree, the CF concept is well accepted and popular among SSFs. Many SSFs are not able to participate without gaining access to the financial and other resources that agribusiness companies involved with CF schemes require.

Contract Farming as a choice is usually a business decision and the approach is commercial in focus [1]. Fig. 1 below shows a pictorial representation of a theoretical CF framework. The figure sets out the phases that must be contemplated when designing and executing a successful CF endeavor. As shown in Fig. 1 below, an essential pre-condition for a profitable CF arrangement is the reality of a market for the produce. However, the two authors noted that the existence of a market for the products is vital, and so is a range of factors such as bodily, social and cultural environments. They argued that, the

appropriateness of practicalities, land availability and accessibility of resources in the form of finance and agricultural inputs are vital for ensuring that the pre-condition phase of any CF arrangement is set on a good note.

Furthermore, the authors noted that government support, which is another key factor of the CF framework, is important. Contracts need to be supported by the regulatory system. The existing laws of a country, in a CF environment, should not restrain the agribusiness company from CF developments. (Fig. 1) shows that government support includes ensuring that factors such as political stability in the environment, industry regulations, general legislation and the land tenure system, all support the development of CF ventures in selected areas.

#### 4.6. Stakeholders in Contract Farming

Contract farming involves at least five types of stakeholders [63] (Table 4):

**Table 4. Stakeholders in contract farming.**

a) <i>Contracting Company</i> . The contracting company is normally a medium or large-scale getting or obtaining a steady flow of high-quality agricultural products at the lowest price achievable. The company faces problematic choices in that it is easier to work with small number of large farmers, especially if they have the financial and technical resources to produce a high-quality product throughout the year. However, large-scale farmers may be difficult to negotiate with and the company may be cautious of becoming too reliant on them. In Africa, the contracting companies may face political burden from governments to demonstrate that they are working with SSFs and assisting to endorse pressures from other buyers of the commodity, who may try to distract the contracted output and from others in the same sector, who may undercut their prices. A ceaseless source of risk is the fact that one highly publicised case of food poisoning could put their entire business scheme at risk.
b) <i>Participating Farmers</i> . Farmers who join in a CF scheme generally do so of their own desire, but there are numerous sources of nervousness within the contracting company. Farmers may think that the quality of inputs provided is second-rate. Others may be perplexed or distrustful of the yardsticks used by the company to grade their harvest, because the grade determines the price the company will pay. When market prices are high, farmers may be enticed to sell some of their crops/products on the open market. They risk the likelihood of losing their place in the CF agreement if discovered. There may also be unease about the probability that the company will start to contract with a different set of farmers who can undercut them or offer better quality. Otherwise, the company could decide to vertically integrate by renting land and growing its own product with hired labour. It can be established that of late, corporate companies have been formed to lease land from farmers for the sole purpose of growing crops for processors.
c) <i>Nonparticipating Farmers</i> . SSFs who do not partake in a CF scheme may be jealousy of not having access to inputs, credit and the guaranteed market that participating farmers enjoy. At the same time, they may be unsure if it is worth joining given some of the complaints they hear about the company. Usually, they may not be able to join the scheme because of some criteria used by the company regarding location, farm size, irrigation, assets, and/or literacy. Still other farmers may have been contract farmers previously but left the scheme, either because they believe they have the skills to market the product themselves or perhaps because they were caught side-marketing and lost the contract.

(Table 6) contd.....

d) <i>Government</i> . Government workers are generally willing to have a formal-sector agribusiness company because it generates tax revenue and may contribute to exports. Additionally, the company creates jobs and shows that the government is sorting out the problems of rural areas. At the same time, the company may habitually pressure the government for extensions on its tax concessions, for better roads to the factory and for more reliable electricity. For a given size of operation, government officials would generally desire that the company work with more SSFs and pay better prices, but they are also aware that if costs rise too much, the company may move its operations to another country where labour costs are cheaper or lower.
e) <i>Farmer Organisations or Non-governmental Organisations (NGOs)</i> . Usually, a cooperative, farmers’ organisation, or NGO plays the role of in-between or arbitrator between farmers and the company. This understanding has the potential to reduce the transaction costs for the company in communicating with farmers, distributing and collecting the harvest. NGOs are sometimes engaged in farmer training and input delivery, while cooperatives and farmer organisations are more expected to be involved in collecting the harvest for the company and other organisational duties. The organisation attempts to represent the interests of farmers to the company to get better prices or evident rules on grading. But it also comprehends that, if it drives too hard, the company could cherry-pick to work directly with farmers, cutting the organisation out of the system, or it could work with farmers in other areas.

Source [63]

### 5. NATURE OF CONTRACT FARMING MODELS/SCHEMES

It is commonly agreed that working in CF arrangements is profitable and gives income stability and access to loans. However, these advantages do not get to the poorest SSFs who have the most to benefit [64]. There are obvious barriers to entry and agribusiness companies do sometimes tighten the conditions of contracts or go back to their own farms of production over time [64]. Two procedures of socio-economic differentiation are linked with CF, that is, separation between participants and non-participants and separation among participants. In some instances, out-grower schemes happen to have created full proletarianisation or landless [65].

The literature indicates that beneficial spillovers from CF, for example, technology transmission, can be hindered by clampdown of competition by the contractors. Therefore, the assumption that CF motivates commercial agriculture and accommodates the rising of competitive producers and markets should not be exaggerated (there has been positive evidence for employment creation and spending relationships). Usually, deductions for inputs and advances are taken from farmers’ returns; stories of indebtedness and unfair treatment have been reported but results differ tremendously [1]. Misunderstandings can arise within families if, for example, a new cash crop requires a shift in working conditions and issues on who does

receive the proceeds/earnings from the marketing of the crop/livestock arise [20].

This gives challenges to women but they also get a chance to revise their labour obligations and payment terms. The threats posed by CF as regards to food availability inside the family and in surrounding areas can be lessened by making sure that women receive some of the payment, controlling land change and introducing crops that do not clash with the farming calendar, while supporting local food markets.

Baumann [36] explained that CF schemes have different features. These features largely depend on the number and extent of involvement of the actors in the agricultural value chain. In addition, Eaton and Shepherd [1], in their FAO’s manual for CF, identified the following types of CF models/schemes (Table 5): The Centralised; Nucleus Estate; Multipartite; Informal and Intermediary Models.

#### 5.1. Contract Farming as a Model of Agricultural Value Chain Finance

Contract Farming is a transformation in agriculture that integrates independent SSFs, traders, buyers, financial intermediaries and agricultural investors that have been in fragmented chains before [68]. For any financing arrangement to be successful, these once fragmented chains must be seen as a single structure, which is the value chain.

Table 5. Contract farming models/schemes.

Model	Description	Suitability/Attributes
<b>Centralised</b>	Has a centralised buyer (agribusiness firm), which buys products from several farmers both large scale and small-scale farmers [66]. It involves vertical coordination of the operations, with quota allocation and strict quality control	Annual crops, poultry, dairy and for tree crops requiring extensive processing, e.g tea or vegetables for freezing or canning purposes.
<b>Nucleus Estate</b>	The sponsoring firm is expected to manage a central canning or estate. guarantees throughput for the processing plant though some sponsors may decide to confine it for research or breeding	Resettlement and transmigration schemes
<b>Multipartite</b>	Farmers are organised into cooperatives, which may receive funding from a selected financial institution	Organisation of farmers into groups and cooperatives helps to ease administration of any financial support rendered.
<b>Informal</b>	Production contracts are designed, mostly, on an informal basis, often seasonally to enable the production of selected commodities [67].	The lack of coordination of farmers’ activities requires government input through provision of essential farming services like agricultural research and extension.
<b>Intermediary</b>	Sponsoring firm’s subcontracts bondages with farmers, for example, to go-betweeners for ease of coordination and administration. A go-between has overseen that farmers abide by the dictates of the contractual agreement, however, with ultimate accountability to the sponsoring organisation.	The buying company lacks control of production and quality along with prices paid to the farmers

Source: [1, 36].



**Table 6. Linkages between farmers and contractors.**

Type of Linkage	Attribute
The spot market where the farmers as producers come to sell their products.	This is the instant market where farmers come to trade their products, the market is considered riskiest as regards price setting [70]
A contract to produce with ready-made buyer called CF.	Uses vertical integration process to bolster relationships between buyers and producers [70]
A trust-based relationship	Which is between buyer and farmer and is long term and based on interdependency and trust
A capital investment by a buyer usually for the advantage of the producer	An outlay by a buyer for the advantage of a farmer – typified good levels of producer integrity and credibility; producer dependent on the investor [71]
A company that has become fully vertically integrated	Builds on the good relationship with farm producers and markets [71].

Source [6, 7, 71]:

The following five linkages describe the relationship between the farmers and the contractors [69] (Table 6):

According to Quiros [72], financiers are uncomfortable when it comes to providing finance for farmers whose production and sales rely on the spot market, which is characterised by varying market demand and prices. Quiros [72] noted that they are more comfortable with a contractual arrangement within a value chain as the market perils can be better coordinated. This [70], called “the financiers’ comfort zone”. Quiros [72], in examining the Hortifruti CF case in Costa Rica, argues that financiers perceive the contractual structure between the buyer and the producer to be a risk minimisation instrument. As such, they feel secure when dealing with actors of a value chain that are bound by a contract, especially as far as SSFs are concerned [73].

Vorley *et al.* [74] opined that SSFs agriculture has become important so much so that a better appreciation of such is required and they classified the agricultural value chain finance models into four groups:

- (1) a producer –driven association
- (2) a buyer-driven model
- (3) a facilitator-driven model
- (4) an integrated model

Winn, *et al* [68, 70]. argued that buyer-driven agricultural value chain finance models are the basis for many submissions of value chain financing; moreover, stating that CF is the most familiar buyer-driven value chain model.

## 6. CONTRACT FARMING OBJECTIVES AND PROVISIONS

Wolf, Hueth and Ligon [75] noted that agricultural contracts have three definite purposes. Firstly, they serve as a coordination tool that allows the different players to make decisions that align with the decisions of the other players in a contract arrangement. For instance, a typical farming contract would state the quantity to be delivered at a stated time and at a given location. Secondly, contracts are used as a means to offer incentives and impose penalties in order to stimulate good performance. No transaction will be concluded without each party to a contract recognising that there exists some form of incentive for them in the arrangement [5]. When the sponsor insists on a particular performance output from the farmer, for instance, where special quality is required for specific crops, the contract clearly stipulates the reward that the farmer will

get for such performance compliance [76]. Thirdly, the contract spells out financial risk allocation amongst the parties to the contract [77]. For instance, Bijiman [5] stated that farmers can alleviate the risk of lost income owing to a poor harvest by undertaking an arrangement with the sponsor to state the share of compensation unfettered by realised harvests in a given season.

### 6.1. Drivers of Contract Farming

Drivers of the renewed interest in CF are both economic and political, both of which are related to the state of the present-day world food system and its opposing trends of globalisation and localism [35]. The emergence of CF can be linked to a new standard of living of consumers in wealthy nations that increasingly pay attention to diet and health [35]. They state that agriculture is compelled to shift from an attitude of “here’s what we produce” to a situation where farmers take note of what consumers are craving for. The partaking in value chain demands investment in technologies, research and extension; to which SSFs often lack admittance. The proponents of CF hold that the private sector, instead of a capacity-weak state, can provide SSFs in developing countries with access to the technologies and inputs needed to integrate markets. A motivation is related to the capitalist imperatives of increasing efficiency and minimising transaction costs and risks in an increasingly volatile and competitive global market. CF can reduce transaction costs, since family labour internalises the majority of labour costs [25], such as wages, supervision and social security costs and risks related to production. The final driver of a renewed interest in CF relates to recent changes in the politics of development discourse. In effect, it seems that CF has gained renewed momentum partly because of a desire to consolidate agribusiness interest with a pro SSFs development discourse. In this respect, Oya [78] provocatively stated that the pro-SSF bias may not constitute more than a public relations exercise for rent seeking agribusiness. Though CF has been advocated as a tool for development long before the recent boom in foreign investment to the African continent [34], it seems that the popularity of CF as an SSF inclusive business model has exponentially increased in connection with the investor rush to land in Africa.

Farmers and companies have different motivations and willingness to engage in CF based on the benefits and drawbacks they face in CF arrangements; these are summarised here (Table 7):

In recent policy discussions, making agriculture more

commercialised is perceived as a key component in addressing growth and poverty reduction in the African continent [79]. They add on to say, subsistence production for home use is selected by Small-scale Farmers (SSFs) because it is subjectively the best alternative, given all limitations. In a universal sense, however, it is one of the largest persistent misallocations of human and natural resources and due to population pressure and natural resource constraints, it is becoming less and less viable [79]. Some drivers for commercialisation are listed as follows [79]:

- Population Growth
- New technology
- Market access
- Food staples intensification
- Asset accumulation

**7. ASSESSMENT OF FACTORS THAT IMPACT ON THE VIABILITY OF CONTRACT FARMING**

The taking on of CF rates in the past two decades has amplified, examples embrace USA which rose from twelve percent in 1969 to thirty-six percent in 2004; in Brazil seventy-five percent of poultry is produced under contracts; and rules that support CF have been established in Vietnam, India, Thailand and Morocco [80]. In Southern Africa, it (CF) is now gaining attention as an effort from governments to commercialise SSFs in order to increase their income, improve the standard of living, and create employment [45]. Maize production in Malawi, sugar cane schemes in Swaziland, South Africa and Zimbabwe and horticultural schemes in Zambia and Zimbabwe are some of the successful examples of CF in Southern Africa [81].

There has been a lot of market liberalisation in most African countries in the last twenty years plus and this has resulted in elimination of state enterprises or monopolies and encouraged private sector activities in production to improve competitiveness and efficiency in markets [82].

According to Pandit *et al* [83], CF arrangements have proved to be a positive solution, to a large extent, in Zimbabwe, especially as it draws new businesspersons with new finance and skills into the sector, remodeling economic and political relationships and spreading the gains of its land

reform in new ways.

Small-scale Farmers face shaky demanding situations in cases whereby the buyer evades buying the products and they are stuck with the products. Correspondingly, contractors face the same problems of being discouraged by farmers who sidetrack inputs to other crops or sell them and sell products to open markets if the price is higher than agreed [84]. A multiplicity of factors which involve literacy level of farmers, gender preference, bias towards larger farms by contractors, tenure security and added labour burden on the farmer, need to be investigated to study their bearing on the viability of CF [84]. Environmental factors which include suitability of the area to the production of a particular crop, use of environmentally workable farming practices, economic factors which include lack of financing from banks and credit institutions, prevailing interest rates charged by banks to contractors for loans and low profit levels on both sides due to high production costs, also need to be tackled [83].

Viability of CF can be expressed as the probabilities of success that CF has, given the factors surrounding it which involve social, economic, biological and environmental/ecological issues [82].

**7.1. Implications of Contract Farming in Africa**

An established challenge for SSFs in Africa is low yields compounded by poor quality due to lack of markets, credits and technology in recent years worsened by unstable prices of energy and food and, lately, by global financial crisis [83]. The biggest issue facing African governments is the increasing small-scale farmers’ access to agriculture and research services [66]. African agriculture is inherently dualistic with a large-scale sector which is better integrated in the market economy than the small-scale sector (which is larger in terms of numbers of farmers) but it is poorly integrated into the market economy [1]. In general, both large scale and smallholder farmers have a crucial role to play in the transformation of Africa’s economy from agrarian to urban industrial, where the majority of people experience an urban-industrial middle-class life [83]. However, the mushrooming of high value agricultural food chains and the associated spread of quality standards have triggered a strong debate on the impact of poor subsistence producers in developing countries [1].

**Table 7. Benefits & drawbacks of contract farming.**

	<b>BENEFITS</b>	<b>DRAWBACKS</b>
Access to Markets	<u>Access to High Value Markets:</u> CF can link SSFs to high value markets where they can sell crops under favourable terms.	<u>Monopsonistic Markets:</u> Firms may exploit SSFs who are tied to a single purchaser (that is, extract increasing rents from farmers, charge high interest rates for input loans). Firms can also specify characteristics of contractors and exploit marginal producers.
Production and Marketing Costs	Farmers can receive inputs at lower costs and extension services. It may ease transportation costs.	Depending on contracted price, input and marketing costs may reduce farmer profit; farmers may have low bargaining power with contractors.
Improved Technology	<u>Access to Agricultural Technology:</u> Firms engaged in CF often provide necessary inputs, technical assistance and training to their smallholder partners in a timely fashion. Learning by doing may have spillover effects that increase productivity of non-contract crops.	<u>Production Risk and Farmers Investment:</u> New agricultural technologies may be riskier and risk may be borne by farmers. With input intensive (fertilisers, pesticide, herbicide, etc.) agriculture, serious health conditions and environmental pollution may result.

(Table 9) contd....

	BENEFITS	DRAWBACKS
Price and Contract Risk	<u>Reduce Price Fluctuation Risk:</u> Contract Farming lowers the risk of price fluctuations if contract prices are pre-set. Furthermore, CF spreads production risk among the parties involved.	<u>Contract Enforcement:</u> Lack of contract enforcement in many developing environments makes it easier for either party, farmers or companies, to break the terms of the agreement. <u>Sideselling and Delays in payment or changes in contract terms.</u>
Transaction Costs	Not applicable	<u>Preference for Large Farms:</u> Agricultural firms may prefer to arrange contracts with large farms to minimise transaction costs. Thus, CF could marginalise extremely poor SSFs.
Credit	<u>Access to Credit:</u> Contract Farming offers SSFs the opportunity to access capital from contract firms.	Not applicable

Source: Adaptation from Setboonsarng [29]

A crucial issue pertains to exclusion of a large share of farms, especially SSFs in the process of vertical coordination. Three reasons are mentioned in a study [82] for this. First, transaction costs favour large-scale farmers in supply chains, which is attractive to companies due to less labour and costs of administering contracts with a few large farms compared to smaller farmers. Second, Small-scale Farmers tend to be more financially constrained when some amount of investment is required for the purpose of contracting with companies or in the supply of high value produce. Third, companies have to fork out large amounts as small farmers often need more assistance per unit of output.

In this regard, scientists have to come up with workable solutions to CF arrangements, particularly promoting and supporting growth in incomes for agricultural communities, in particular SSFs. There is need to take cognisance of the embedded heterogeneity in the African agricultural sector.

Amongst studies on CF in Southern Africa [36], concluded that most CF arrangements seem to contribute to SSFs success by improving farmers' income, though in the short term. In an early assessment of the literature, [26] it has been discovered that most reports suggest that farmers benefit from CF because it provides them with agricultural inputs on credit, technical and extension assistance and often a definite price, allowing them to produce a higher-value commodity which otherwise would not be possible. In a review of the experience of CF in Africa in the early 1990s, Glover and Ghee [85] concluded that farmers were generally better off as a result of their participation in CF, in spite of numerous social problems arising in the communities. Little and Watts [8] compiled a set of case studies (seven) on CF in Africa, directing on the disagreements between farms and the contracting companies, the power inequalities, rising rural imbalances as contract farmers grow wealthy enough to hire farm labourers, and the intra household tensions over new revenue allocation. In these studies, it was concluded that the income from CF increased from a moderate of 30-40% to a high of 50-60% proportion of participants [8]. In similar comparative reviews by Vermeulen and Meyers, Asano-Tamanoi [32, 86], in Latin America, South East Asia and Africa, they also identified a rise in farmer income. Vermeulen [87] conducted research on the outcome of contracting in forestry on poverty lessening in Africa. This study showed positive impacts of communities through presenting opportunities for income diversification and access to new information. However, while empirical studies seem to show a positive relationship between CF and welfare improvement of SSFs, other studies have noted that CF in some instances is a burden to SSFs in Africa [86]. Little and

Watts [8] noted that CF led to situations of deteriorating debt among smallholder farmers.

Singh [9] identified the following sequences of problems associated with contract vegetable production in India, in the state of Punjab: Imbalanced power between farmers and companies, contract breaching, environmental unsustainability and social discrepancy. However, his survey revealed that most farmers' income had increased since their joining of the scheme and they were generally content with the contracts.

Birtal *et al* [88] showed that, for poultry farmers in India, the coefficient of variation (CV) of the profits of contract farmers was lower than the CV of profits of noncontract farmers. Birtal *et al.* [88] also examined the contract production of vegetables and milk in India. They found that vegetable contract farmers received prices that were eight percent higher than those received by non-contract growers and contract milk producers received prices that were four percent higher.

Warning and Key [89] studied CF in groundnuts in Senegal. NOVASEN, a private company, contracted with 32000 growers and produced approximately 40000 tonnes of groundnuts annually. They found that the increase in gross agricultural revenues associated with contracting was statistically significant and large, being at least fifty-five percent of revenue from noncontract farmers.

Simmons *et al.* [90] did a study in Indonesia that examined contract farmers with interests in poultry, seed maize and seed rice. The contracts for poultry and seed maize had higher capital returns, whereas no significant influence of contracting was observed for farmers of seed rice. Simmons *et al.* [90] established improved welfare and income for contract farmers, an effort which reduced absolute poverty.

Even though numerous studies confirmed that contract farmers gain from partaking in Contract Farming, the studies also noted that there were frequent contract breaches by both buyers and farmers [1]. They also found that in some cases, market prices rise and farmers try to sell to other buyers (side marketing), avoiding repayment of the input credit. In some instances, prices would fall and the processor buys supplies from the open market, imposing strict quality standards on the contractors to avoid purchasing from them at the agreed price. Since most contracts are generally not legally enforceable, the only recourse the company has is to refuse to work with the farmer in the future. Similarly, the main recourse for farmers is to withdraw from the scheme or to bring the case to local officials for intervention [90].

In the last twenty-five years plus, there has been a fast increase in studies that use quasi-experimental research designs to assess the effects/implications of specific empirical instances of CF on SSFs [15]. Ton, *et al.* [15], in their research findings, point to the need for substantial income effects for CF arrangements to survive overtime. They suggest that there is a need for companies to propose to SSFs above-local market prices, especially in annual crops and when no cooperative is involved as the intermediary between the company and the farmers. The poorest farmers rarely participate in CF arrangements; in sixty-two percent of the cases in a study [15], the contract farmers had significantly larger landholdings or more assets than the average farmers in the area of their study.

In India, farmers have to bear the risks of price volatility for their production, especially perishable horticultural goods. The absence of an effective price support system and underdevelopment of post-harvest infrastructure such as cold chains, create risks that often lead to violent protests and in extreme cases, farmers' suicides [91]. In the face of these problems, CF agreements between SSFs and food processors or fast-moving consumer goods companies for the supply of specified commodities at prefixed prices are immensely helpful. Although some form of CF has existed since the 1960s, India's Agriculture Produce Marketing Act 2003 formalised the CF system [91].

There are many CF success stories that demonstrate that the model can work, for example, Pepsi Co struck a CF deal with Punjab SSFs for tomato supplies in 1989, and the Appachin Cotton, a ginning and trading company from Tamil Nadu, have been successful in implementing CF [91].

Producers in Thailand who used correct and recommended crop varieties and adopted the 'Good Agricultural Practices' (GAP) achieved higher levels of technical efficiency [92]. Therefore, development policies should be used to increase technical efficiencies via government and agribusiness companies' technical and extension staff (that is, policies on training on GAP to increase SSFs knowledge and suggesting that the SSFs use recommended varieties and cropping systems) [92].

Krasachat [93], noted that internal (household endowment and knowledge) and external (traders, credit, technology and market information) factors affected the farmers decision to devote more resources for chilli agribusiness both directly and indirectly. He believes that credit and technology access were found to provide the highest positive impact and, therefore, must be readily available and accessible to ordinary farmers. This is the same for all CF arrangements.

Therefore, policy implications concerning the findings by Mariyono [94] need adequate formulations such as that SSFs' welfare will increase, including in CF engagements. Governments are encouraged to establish agribusiness terminals and marketing infrastructure in agriculture producing regions to promote and increase market efficiency.

Therefore, evidence gathered so far suggests that successful CF schemes generally raise the incomes of farmers who participate.

## 8. HOW TO MAKE CONTRACT FARMING WORK

Contract Farming seems to have the best results for farmers who are better placed on the negotiating forum owing to their bargaining power relating to contractual terms. Baumann [36] demonstrates that contracts tend to be more favourable for smallholders when the processor greatly depends on the grower for a constant flow of raw material because it increases the farmer's bargaining power, for example, farmers of sugar cane in Kenya or oil in the palm sector of Cote d'Ivoire [36]. However, Armah *et al* [10] argue that dependence on a certain crop and flow of alternative markets for outputs decrease grower's ability to gain from CF arrangement by decreasing bargaining power and thereby increasing potential for exploitation by firms. Citing several case studies, the same author shows the importance of access to information, alternative production opportunities, implementation through local intermediaries and farmer organisations and farmer input in the scheme design as key mechanisms that increase farmers' bargaining power and contribution to favourable farmer outcomes. Other authors, for instance, Ajjan [90], found that giving conditional bonuses to farmers was also another way to minimise the probability of the contract breach by smallholder farmers.

Lack of contractual enforcement, particularly in Africa, has been discovered to hamper private investment and economic growth. The governments and other relevant stakeholders in the agricultural sectors should work together as highlighted in Fig. 2 below:

### (1) Research & Development activities BLOCK

- Demonstration farming
- Evaluation of farmer Economics Model
- Identification of Varieties and hybrids
- Trials and Short listing – Selection
- Blue Print for Agricultural Practices

### (2) Technology transfer BLOCK

- Farmer Education Program
- Field Trials
  - Multi Locational and Crop timing
- The Extension Services Team
  - Selection & Training
- Farmer Organisation

### (3) Commercialisation BLOCK

- Harvesting & Transportation
  - Crop Monitoring
  - Processing & Packing
  - Farmer Payment System
  - Land Preparation & Planting
- Source [94]:

In Java, farmers reported that economic motive was the main driver affecting the farmers' decision to engage in chilli agribusiness [93]. He says, regarding the technology introduced to SSFs, a wise decision needs to be considered in selecting environmentally friendly farming. A recent study [95]

shows that chilli farming has excessively applied agrochemicals and led to environmental problems. This a very crucial point to consider for all those involved with CF.

It is necessary to note that intensively operated chilli agribusiness provided more income and employment than other crops in Java [93]. The country’s chilli agribusiness has primarily been done by only a small fraction of farmers due to limited resources. Many SSFs are still poor and subsistence or semi subsistence.

The concept of ‘Stepping up from Subsistence to Intensive Agriculture’ with high-valued crops started in Java, provides hope for welfare improvement [93] and is recommended for all forms of CF.

The essential prerequisite for CF investments should encompass the potential of the arrangement to yield profits. Following the identification of a likely profitable market, the sponsoring company may consider assessing whether contracted farmers in a certain area may profitably supply the

market. The process entails assessing the physical and social environment of the target location and the probable support that the concerned government may provide. Below is a summary from various authors, of some key preconditions for successful CF in tabular form (Table 8):

An important finding drawn from a study [100] was that, using the participatory research approach can be an effective tool to enhance SSFs’ knowledge and increase the rate of adoption, especially with SSFs engaged in CF. Additionally, according to Adhipanyakul and Pak-Uthai [100], other factors such as farmers’ risk attitude in CF and behaviour should be involved in the adoption model as they may affect the adoption of innovation and rate (this paper does not discuss these issues and is, therefore, recommended for another study).

According to Singh [9], *coordination, motivation and transaction costs* are three pillars of a contract arrangement. As such, it is essential to consider contract design as a multi-criterion design problem. Singh [9] summarises the basic rules for contract design as follows (Table 9):

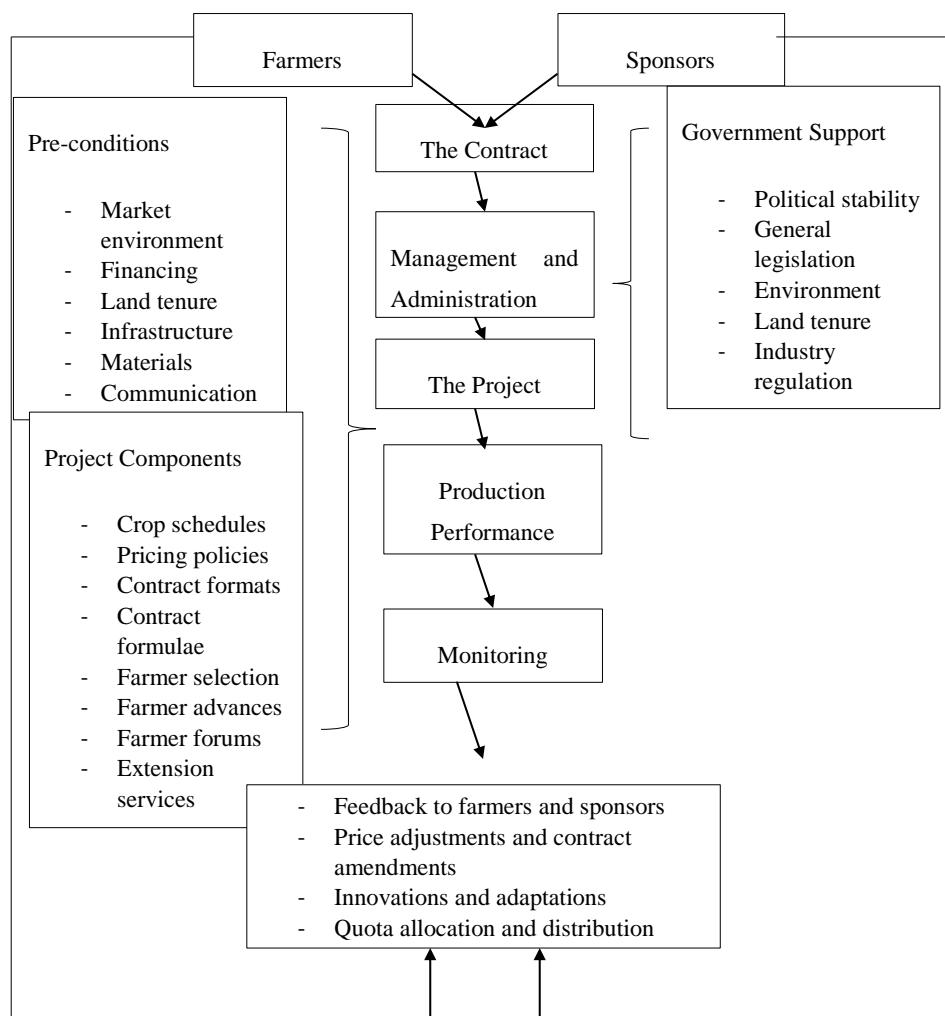


Fig. (1). Contract Farming Framework; Source 1.

1. **Research & Development activities BLOCK**
  - ✓ Demonstration farming
  - ✓ Evaluation of farmer Economics Model
  - ✓ Identification of Varieties and hybrids
  - ✓ Trials and Short listing – Selection
  - ✓ Blue Print for Agricultural Practices
  
2. **Technology transfer BLOCK**
  - ✓ Farmer Education Program
  - ✓ Field Trials
    - Multi Locational and Crop timing
  - ✓ The Extension Services Team
    - Selection & Training
  - ✓ Farmer Organisation
  
3. **Commercialisation BLOCK**
  - ✓ Harvesting & Transportation
  - ✓ Crop Monitoring
  - ✓ Processing & Packing
  - ✓ Farmer Payment System
  - ✓ Land Preparation & Planting

**Fig. (2).** Building Blocks for Contract Farming to Work.

Contract agreements/arrangements that have failed previously have missed at least one of these rules. Though these rules are useful as a checklist for keeping the contract relationship balanced between firms and farmers, it is never an easy task to timely realise every item [9].

Below, in Table 10, the author will take a look at some points on potential advantages and disadvantages associated with Contract Farming taken from selected authors.

Finally, Goldsmith’s [107] reviews of several case studies of CF in Africa, Asia and Latin America and established that in the majority of cases, the income of growers is greater than that of non-growers. Moreover, he finds that participation in CF is associated with the adoption of better production technologies. Singh [9] also compares CF Arrangements in the Indian State of Punjab and finds that those SSFs who participate in CF have higher incomes.

**Table 8. Preconditions for successful contract farming.**

<ul style="list-style-type: none"> <li>• The sponsoring company should identify a market for the intended production. To address production perils, contractors must invest in production and manage how much is produced at farm gate [96].</li> </ul>
<ul style="list-style-type: none"> <li>• The sponsoring firm ought to be sure of the market’s chances of being profitably supplied for the long-term period. Regular dialogue and comparing of information on costing and pricing on the markets will increase mutual trust between SSFs and contractors [96].</li> </ul>
<ul style="list-style-type: none"> <li>• Potential returns should be/and are seen to be more attractive by farmers compared to alternatives available. Also, the level of risk associated with the contract ought to be acceptable to the farmer [82].</li> </ul>
<ul style="list-style-type: none"> <li>• The farmer must have probable returns demonstrated in relation to realistic yield forecasts</li> </ul>
<ul style="list-style-type: none"> <li>• The natural environment needs to be ideal specifically for the planned product.</li> </ul>
<ul style="list-style-type: none"> <li>• Contract Farming sometimes works under out of date policies and laws. Governments should review them and line up them to current day realities [96].</li> </ul>
<ul style="list-style-type: none"> <li>• Lack of congruency in the laws of various nations can deprive farmer’s maximum exposure to markets. Regional alliances should advocate for uniform policies and laws, specifically those that remove trade barriers [97].</li> </ul>

<ul style="list-style-type: none"> <li>• Designing of an all-encompassing contract that covers essential characteristics of CF and which are understood by all stakeholders [96, 98].</li> </ul>
<ul style="list-style-type: none"> <li>• Associated infrastructure systems for communications and other utilities ought to be appropriate for both farming and agro-processing, for example [99].</li> </ul>
<ul style="list-style-type: none"> <li>• Availability of land and tenure – contract farmers need unobstructed access to the relevant land.</li> </ul>
<ul style="list-style-type: none"> <li>• Input availability – there is need for assured input sources and with inputs being delivered to the farmer timeously</li> </ul>
<ul style="list-style-type: none"> <li>• Social aspects – there is a need to avoid conflicting cultural attitudes and practices with farmers’ commitments, therefore sponsors ought to understand local practices</li> </ul>
<ul style="list-style-type: none"> <li>• Appropriate laws of contract and other laws are necessary along with a working and efficient legal system. Promoting out-of-court settlements to settle disagreements quickly and cheaply, with non-governmental organisations and company representatives taking on the role of arbitrators [98].</li> </ul>
<ul style="list-style-type: none"> <li>• Governments should be cognizant of potential unintended results of regulations and the need to shun overregulating. There is need for certification schemes to protect all stakeholders.</li> </ul>
<ul style="list-style-type: none"> <li>• Governments ought to ensure the provision of essential services like research and, sometimes, extension. Combined effort and making of strong united organisations for farmers will help boost their negotiating position. The organisations must be made professional via coaching and other capacity-building programmes. Continuous research is necessary to help identify and correct the negative effects of CF [1]</li> </ul>
<ul style="list-style-type: none"> <li>• Governments may endeavor to coordinate agribusiness and suitable farmers. Collective action and building of strong umbrella organisations for farmers will increase their bargaining power. Such organisations need to be made professional through training and other capacity-building programmes [93].</li> </ul>

Source: [1, 82, 93, 96 - 99].

**Table 9. The basic rules for contract design.**

<ul style="list-style-type: none"> <li>• Coordinating to minimise production costs which means using price signals or instructions or both;</li> </ul>
<ul style="list-style-type: none"> <li>• Balancing decentralisation and centralisation in farm decisions which impact problems like moral vulnerability and hold-ups;</li> </ul>
<ul style="list-style-type: none"> <li>• Minimising or sharing risk uncertainty;</li> </ul>
<ul style="list-style-type: none"> <li>• Mitigating pre- and post-contractual opportunism costs (adverse selection and moral hazard) by various mechanisms for allocating contracts and monitoring. Moral hazard costs could be reduced by having one party bear part of the cost, social pressures, incentive structures, or group contracts/incentives. Adverse selection could be mitigated by rationing, or offering a contract tailor made for some “good” farmers only; having a ‘menu of contracts’ which helps to screen farmers as their choice of certain contracts may reveal their true type; having group controls; and creating individual risk rating/information collection processes before the contract is signed;</li> </ul>
<ul style="list-style-type: none"> <li>• Encouraging group or co-operative action among producers to lower costs and ensure better compliance;</li> </ul>
<ul style="list-style-type: none"> <li>• Motivating long term contracts to reduce hold-up problems;</li> </ul>
<ul style="list-style-type: none"> <li>• Balancing pros and cons of the renegotiation of contracts over time;</li> </ul>
<ul style="list-style-type: none"> <li>• Reducing direct costs of contracting; and</li> </ul>
<ul style="list-style-type: none"> <li>• Using transparent contracts.</li> </ul>

Source [9]:

**Table 10. Potential advantages & disadvantages associated with contract Farming.**

Potential Advantages	Potential Disadvantages
<p>a) Risk and Uncertainty: Producing crops outside of a CF arrangement and for sale at the market often means that a farmer is unsure of the price he will receive once he gets to market. This is especially so in developing countries, where such price risk and uncertainty is often more important than in developed countries, which can cause serious welfare losses [101]. In CF arrangements, however, it is often the case that the agreement between the grower and the processor specifies a price at which the crop produced under contract will be purchased by the processor from the grower, which eliminates price risk. In a study [102], for example, contracts almost always specified a fixed price to be paid by the processor to the grower.</p>	<p>a) Monopsony: Sometimes, it has been found that the crop grown by SSF in the context of a contract farming arrangement is a crop that there is little to no local demand. In West Africa, for example, cotton is often produced within agricultural value chains that are entirely owned by the state, who are the sole cotton buyer in the country [104]. In such relationships, where there is practically no market for the contract crop outside of the contract, the processor often abuses this advantage by renegeing on the terms of the contract, by underpaying growers, by delaying payments and so on [104].</p>
<p>b) Imperfect Factor Markets: Economic underdevelopment is often the result of fragmented or missing markets. For example, because of credit rationing due to imperfect information [103], an SSF may not be able to secure a loan, which would allow him to make the required investments to adopt a new production technology. In CF arrangements, however, it is often the case that the processor advances inputs which would otherwise be difficult or impossible for the grower to obtain, and the contracted crop is used as collateral [103]. Bellemare [102], states that the processor often provided seeds, pesticides and fertilisers to the grower, and the contracted crop was used as collateral.</p>	<p>b) Contract Rigidity: Due to specific quality requirements of consumers and the sanitary requirements of regulations in export markets, CF arrangements in developing countries are often much more rigid than production outside for one’s own consumption or for sale at a market [100]. Inputs have to be applied in specific tasks, have to be performed at specific times and specific techniques or implements have to be used. This often comes at great cost to SSF who are usually their own bosses and produce according to their own schedules.</p>

Potential Advantages	Potential Disadvantages
<p>c) Extension Services: The public provision of extension services is often lacking in developing countries and as part of CF agreements, processors, often provide their own private extension services. The private extension services are often more trusted by farmers than are public extension services. Bellemare [40] found that yields are positively and significantly related to the number of such private extension visits to the grower by a technical assistant working for the processor.</p>	<p>c) Leakage or Side Selling/Marketing: This is the opposite of monopsony power. In cases where there is a local market for the crop produced under contract, it is not uncommon for the contracted price to be lower than the local market price at the time of the harvest. In such cases, it might be tempting for growers to sell some of the contracted crops on claiming this as a loss. Whereas the exercise of monopsony power is an opportunistic behaviour on part of the processor, side selling is what [105] refers to as leakage, which is an opportunistic behaviour on the part of the growers. Minten, Randrianarison and Swinnen [106] relate an anecdote wherein rampant inflation in Madagascar led to mass leakage among the growers they studied.</p>

Source: [40, 100 - 106]

The issue with both studies by Goldsmith and Singh [107, 9] is that they do not consider the fact that it is entirely possible that those SSFs who elect to participate in CF may have already been better off than those SSFs who choose not to participate in CF prior to their participation. This is known as the selection problem and not only threatens the internal validity of empirical findings but is also challenging to address in practice [108]. Warning and Key [48] were the first to deal with the self-selection of growers into CF in Senegal and they found the participants in CF did, indeed, have significantly higher incomes than non-participants.

Another usual issue in the literature on CF is the nonexistence of external validity. That is, researchers tend to focus on a single crop or on a single region, with little to no implications for other crops or regions. Simmons, Winters and Patrick [109] were the pioneers to aim for more validity (external) by looking at three contracted commodities, that is, maize, poultry and rice in three different locations in Indonesia and they found that those households who participated in CF as poultry breeders and maize growers had better returns to capital than non-participants. Likewise, Wang *et al.* [110] reviewed apple and onion CF arrangements in China and found that participation in CF was associated with higher incomes.

Aiming for external validity, Bellemare, *et al* [101] studied CF over more than ten contracted crops across six regions of Madagascar. Using field experimental methods to deal with the selection problem, he discovered that CF appeared to lead to a 10% increase in income. Most of the information indicates that participating in CF improves the standard of living [111].

**8.1. Lessons to Improve Contract Farming**

Farming contracts play two critical roles for the company, that is, quality assurance and risk management [112]. Baumann [36] argues that contracts should specify both the risk and responsibilities between the growers and companies, incorporating the penalties for breaking the contract on either side. Vermeulen *et al.* [87] noted specifically that out grower schemes often fail when productivity is overestimated and that lower than expected harvest prices can prompt early termination or default. Where institutional structures for contract enforcement are weak, companies absorb more of the risk and cost of contract default because they are often unlikely to pursue growers who breach their contracts [87].

Lack of contractual enforcement in many developing countries, particularly African countries, is often cited as hampering private investment and economic growth. However,

in a study about [113] China, CF agreements do not necessarily require a robust legal system. Such contracts thrived before public enforcement mechanisms developed because in small communities, social norms and pressure are functioned to ensure that contracts are being honored. Similarly, in a study on one hundred agribusiness companies engaged in CF in China [114], found that when public enforcement mechanisms are weak or missing, private or self-enforcement mechanisms such as price floors and specific grower investment requirements significantly improve growers’ contract fulfilment rates. Gow, *et al* [115] noted that the major causes of contract breaches are bottlenecks, which occur when unexpected external environmental changes affect the cost/benefit ratio adequately to make contractual violation optimal for one party.

Gow and Swinnen [116] found that firms could minimise the probability of contract breach by SSFs by providing conditional bonuses. If farmers delivered their products on time, the company could offer input investments or loan guarantees. Furthermore, to ensure that farmers use conditional inputs on company related production, companies have also tied bonuses and/or sanctions to quality and volume requirements [115]. Technical assistance and extension services that companies provide to farmers also serve as enforcement and monitoring mechanisms; in the course of provision, the service agent can verify input and loan use for contract purposes as well as commitment to quality [116].

Engaging with SSFs throughout the entire negotiation and planning process can improve farmer outcomes [117]. They also found out that SSFs signed up to participate in the CF scheme without completely understanding the terms of the agreement. Farmer attrition and breach of contract during the subsequent year were largely a result of incomplete information about the terms of the contract. Ensuring that all parties were aware of the perils and reservations involved in the CF scheme might have mitigated some of the problems [117]. In addition, successful dissemination and uptake of agricultural technologies required thorough testing and farmer input [117].

Contract Farming schemes can have negative consequences for non-participating farmers by directing public/government resources on a small number of farmers [36]. However [32], it has been found that CF schemes were equally likely to reduce social separation as they were to promote it; CF can act as a leveller by reducing risks, creating access to inputs, markets and technology and can also favour



the relatively wealthy farmers in selection into the scheme [36]. Furthermore, while CF often involves SSFs, evidence shows that it generally requires a title to land, thereby excluding the poorest farmers, tenants and the landless. Apart from secure land tenure, contracts often stipulate minimum land size, health status, ability to provide or hire labour and sometimes even marital or education status, further narrowing the subset of SSFs able to participate [36].

Due to unintentional selection of partaking farmers to join CF schemes, the trickle of empirical studies on the welfare effects of CF participation has faced methodological difficulties in establishing the pivotal impacts of CF [118]. It is difficult to determine whether observed welfare changes can be attributed to CF involvement, so the degree to which participating farmers benefit from the schemes remains uncertain [117]. For example, a higher income per capita in CF merely reflects the fact that more industrious or more skilled farmers have a greater likelihood of becoming contract farmers [118]. In other words, these contract farmers might have relatively high incomes regardless of whether they participated in CF programmes or not.

It is critical to observe that the effect of CF includes not only direct impact on contract farmers, but also the indirect impact on non-contract farmers through farm labour and industry employment [118]. Certainly, when contracting farmers pledge themselves to supply higher quantities of an agricultural product to a buyer, family labour is usually not enough and they depend more on locally hired labours. Thus, they provide work to those who do not meet the selection criteria for CF schemes. When factory plants are set up locally by the processing companies, the increased production obviously requires labour for the processing activity and thus leads to create employment opportunities.

## 8.2. Side Marketing/Selling

The biggest obstacle facing the survival of CF is side marketing. In a survey [119] in Zimbabwe, ninety percent of the respondent farmers accepted that they did side-market their cotton crop to companies other than those that provided the inputs and the rest indicated that they honoured their contractual commitments. This view was substantiated by company staff who indicated that side-marketing was prevalent and was affecting their organisation negatively [119]. This was mainly due to the prices offered by cotton companies which were deemed to be low and unfair, and avoiding paying back through side marketing was the only alternative. In Zambia, there is the substantiation that the buying companies have an upper hand when it comes to determining the paying prices [120], while Dawes *et al* [121] argued that the companies require that the SSFs must accept the prices they unilaterally set. Mafuse, *et al* [122] established that the profit earned by self-funding farmers was much higher than that of the contract farmers and in any case, a negative return on capital and return on sales obtained by the contracted farmers indicated serious losses. Eighty-four percent of the contracted farmers indicated that their inability to meet other obligations such as children's school fees and other daily needs led to side marketing while seventy percent indicated that poor yields contribute to side

marketing as all revenues generated from the crop will be absorbed by input loans, leaving the farmers with little or no cash to meet their obligations [122].

Under forty percent of the SSFs under CF confirmed that they were aware of their contractual obligations, while the remainder said they did not understand the terms of the contract [119]. These outcomes are much higher than the findings of Muza [123] who stated that the findings of a wide-ranging survey covering a large number of contractual arrangements in the cotton, tobacco and horticulture sectors of Zimbabwe show that a significant number of farmers (around forty percent) did not fully understand the contract specifications. Although contracts cover the responsibilities and obligations of each party, common to all of them is the weakness of enforceability when the contract is breached [44].

The research by Dzingayi [119] confirmed that companies went back to petitioning government for legislation to stem off side-marketing of cotton in line with the recommendations in a study [50] who recommended that the development of the legislation to cover contracts between SSFs and service providers may help protect both SSFs and reduce the risks incurred by businesses. The lobbying by cotton companies in Zimbabwe was fairly successful as this culminated in the promulgation of the Agricultural Marketing Authority (Seed Cotton and Seed Cotton Products) Regulation Statutory Instrument 142 of 2009 (SI 2009), which attempted to bring sanity to the cotton sector by governing the orderly production and marketing of the cotton crop [119]. The instrument prohibits players who have not funded the provision of cotton inputs from buying the crop from SSFs. The Statutory Instrument has been amended through Statutory Instrument 63 of 2011 to make the regulations more effective in addressing side-marketing [124]. However, if farmers do not have access to the legal process, this might prove to be a second-best solution in terms of equity [50]. This is supported by the findings observed by Dzingayi [119] that seventy percent of their respondents alluded to the emergence of a secondary market for cotton production, such as merchants who trade in various consumables in exchange for cotton which merchants will subsequently sell to cotton companies. The Statutory Instrument, although in place, failed to address issues of side-marketing as evidenced by the case of a cotton company in Zimbabwe which indicated that it lost US\$10 million in the prior year after another company had allegedly purchased cotton from its contracted farmers [50]. Another example as reported by [125] was that of Dupont Pioneer, which suspended its long running CF scheme after farmers failed to honour their loans. The enforcement mechanisms either in the case of monitoring the compliance of contracts or breach of the same involving both the promoter/agent and the SSFs are weak, if not non-existent [120].

In Africa, when SSFs become politicians, they sometimes tend to ignore legislation. For example [125], a study reported a strange situation arising from court papers filed at the High Court, in Zimbabwe, in which the Cotton Ginners Association of Zimbabwe accused Sino-Zimbabwe Holdings (a Chinese and Zimbabwe Government partnership) of using political gurus including the ruling party (Zimbabwe African National

Union) to buy the cotton crop from farmers contracted with other companies. It is a clear case of the state subverting its own legislation for the benefit of preferred companies. Mujeyi [124] recognised that the cotton seed marketing system is riddled with pricing related challenges characterised by price negotiation impasses that persists during marketing seasons, prompting government intervention in a supposedly free market system. This is a demonstration of politics interfering with commercial contracts to the disadvantage of companies who would have spent a fortune in sponsoring SSFs in CF.

A strategy adopted by contracting companies in order to reduce side-marketing was the offering of skills training to contracted farmers before they signed the contracts. Included in the training was “what contract farming is all about”. However, Dzingayi’s [119] survey in Zimbabwe showed that this strategy was not effective in reducing side-marketing as indicated by eighty-two percent of their respondents.

A further tactic used by contracting companies is directed farming, that is, close monitoring of the crop growth at various stages up to marketing stages by contract company employees [119]. As part of ensuring continued SSFs compliance, the companies have established a pervasive monitoring and control mechanism; this form of control is internal and relies on social capital [121]. In terms of the legislation in cotton industry, the monitoring modalities of the scheme must include the Agricultural Marketing Authority inspectors, Cotton Marketing Technical Committee members as well as the Cotton Ginners Association [119]. It is important to have the estimate of the likely crop yield that will be compared against the actual deliveries. According to the survey by Dzingirayi [119], only thirty percent of the respondents agreed that the strategy was effective, while seventy percent were of the view that the strategy was not effective as corroborated by continued side-marketing. This was in line with the comment in a study [121] which pointed out that, while it guarantees the delivery of some production to the companies, this mechanism does not fully deliver the desired results and that the practice (side-marketing) is so widespread that companies estimate that they lose up to fifty percent of the crop via the side-marketing despite the existence of monitoring framework. that was in place.

The cotton buyers/companies also organised cotton field days and competitions as a strategy to establish closer relationships with the SSFs [119]. Fifty-six percent of the cotton companies used this strategy extensively and included football and netball tournaments as part of the whole package targeted at farming communities where their operations were in place. The hope was to build lasting relationships with the farmers through such social relationships and thereby building mutual trust among the parties. Just over fifty percent of the respondents agreed that the strategy was effective but pointed out that the benefits were marginal as only those who participated in the tournaments benefited directly and not the farmers [121].

Therefore, CF inputs should be availed to loyal farmers only so that the companies can realise improved recoveries on input loans. Proper screening of contract farmers is imperative in line with ordinary credit facility arrangements. This is an example of a situation where the SSFs have the power to call

the shots.

The interference, negatively, with the cotton industry by Government, is having a huge impact on the cotton industry, resulting in some companies pulling out of cotton production in Zimbabwe. Governments are encouraged to stop interfering with the CF industry and restrict their involvement in creating enabling environments in order for the CF arrangements to be successful. Otherwise, investment into the CF input scheme will be reduced, leading to minimum output that will threaten the survival of the CF strategy.

### **8.3. Examples of Successful Contract Farming Arrangements**

#### **8.3.1. Zimbabwe**

An example where CF has produced positive results is the tobacco production in Zimbabwe. Tobacco growing has become fundamental to patterns of accumulation by SSFs in some land reform areas of the country [126]. Tobacco, Zimbabwe’s traditional and major export crop had the largest increase of SSFs from 8500 farmers in 2000 to 60000 farmers in 2012 [126]. However, an increased tobacco production by SSFs was marred by the decrease in yields [127]. It is estimated that SSFs in Zimbabwe lose approximately sixty percent of their crop between harvesting and marketing. Participation by SSFs in agricultural value chains was hampered by unavailability of production materials, loan facilities, minimum use of technology and unreliable marketing systems that reduce entrance to markets [2]. Approximately one percent of formal bank loans are given to the agricultural sector because they are considered to be high risk and have high transaction costs [128]. The International Food Policy Research Institute [129] has been promoting the making of an environment conducive to assisting in solving issues encountered by SSFs and lure investment to agriculture. The creation of value chains, which include farmers, agribusiness, agro-industries and financing institutions, is one such a model. Due to the uniqueness of hurdles encountered by SSFs, CF has come out as a substitute form of finance and marketing channel for their produce. This has transpired through arrangement with agribusiness, contracting arrangements, as well as direct sales to companies and tobacco auction floors [130].

Regardless of government interference, CF has been well sustained by the Zimbabwean government, and by several companies, for example, the highly successful expansion of SSF cotton farming in the 1980s until price crashed and widespread side-selling/marketing in a privatised market undermined confidence [131]. Out-grower schemes have been used in CF to support major agricultural operations in very different settings, for example, CF is also central to the major sugarcane operations in Zimbabwe’s South-east Lowveld, again, highlighting differential patterns of accumulation by sugarcane producers on relatively small plots [132]. With a few exceptions [133, 134], studies of CF in Zimbabwe have not occupied a wider agrarian political economy outlook. Although the significance of the role of CF and tobacco growing in Zimbabwe in the post land reform period since 2000 has been noted upon [135], there is a need to analyse the occurrences for interpreting the political view and economy of the land reform

in the country.

Contract Farming of the golden leaf (tobacco) commenced in Zimbabwe in 2004 [123], at a time when the financing of the tobacco crop and production were on the decline. Data obtained from Tobacco Industry Marketing Board (TIMB) database shows that over a span of five years, contract farmers performed extremely better than non-contract farmers in regards to production and price per kilogram of crop delivered for sale [129]. Tobacco farming by contract farmers has been moving upwards since the establishment of CF (in 2013, 34 300 farmers produced sixty-eight percent of the crop while 44 500 non-contract farmers produced the rest) [135].

The Tobacco Industry Marketing Board [125] reported that two thousand white large-scale farmers grew tobacco and supplied the majority of the tobacco in the country. At that time, tobacco production was slightly over 200 million kilograms per annum but this dropped dramatically after the land reform as farms were taken over through sometimes violent invasions [135]. From a total point of 48.7 million kilogrammes in 2008, the tobacco production rose significantly to 216 million kilogrammes and sold at an average price of US\$3.17 per kilogramme in 2014 [136].

By global standards, Zimbabwe is the fifth largest producer of flue-cured tobacco after China, Brazil, India and the USA. Tobacco valued at US\$685 million was produced in 2014, representing a Gross Domestic Product (GDP) of about eleven percent [136]. This upsurge in production has been promoted by the presence of a lot of tobacco contracting companies and new tobacco growers. From 2000 onwards, many CF companies entered into tobacco contract arrangements. By 2015, there were sixteen tobacco contracting companies operating in Zimbabwe [137].

The objective of [135] research study was to establish if farmers who engaged in CF did better than non-contract farmers. This would confirm what various researchers had argued - that CF improved the welfare of SSFs [2, 110]. Using descriptive and inferential statistics, an assessment of tobacco farmers in Zimbabwe showed that CF arrangements corroborated that contract farmers did better than non-contract farmers in terms of productivity [135].

It was also confirmed that achievement of contract farmers relied upon effective and operational institutional support, sound and good financial infrastructure, enabling regulatory environments and CF policy issues raised by farmers [137]. On the downside, it was found out that 46.2% of contract farmers would want to opt for CF contracts due to harsh behavior of contractors at the time of repayment, regardless of the conditions, resulting in default [135]. This is evident that there is a poor risk-sharing mechanism, as many SSFs who took part in the survey did not take insurance for on-farm risks through ignorance and lack of funds [131]. This fact indicates limitation in institutions, particularly given that Zimbabwe has no CF legislation and policy to support both farmers and companies [134]. Another negative issue to this success was that those who do CF grow more tobacco than maize (a food crop). Nevertheless, it can be assumed that with the income obtained from tobacco sales, families will be able to provide food for

themselves.

Although those who were under CF wanted to move out of CF if contract arrangements did not improve, over eighty-six percent non-contract farmers were contemplating to join CF so that they could access farming loans [131]. The following increase in numbers of farmers is a testimony to this: from 1373 to 34 280 farmers in 2013 [123, 132] (this has now reached 184 000 [125]), showing increased uptake of tobacco production by SSFs.

Off-farm opportunities have been boosted in the tobacco growing areas as there is greater demand for a cross section of services, including job creation prospects.

### **8.3.2. Examples of Contract Farming Success in Africa**

Contract farming is responsible for the growth of cotton and tobacco in Mozambique [129] and in Zambia, hundred percent of paprika, tobacco and cotton are produced through CF. In Kenya, Contract Farming produces sixty percent of tea and sugar and all the country's tobacco. In the above-mentioned countries and elsewhere on the African continent, CF is used to incorporate SSFs into cash production agriculture. The CF commercial model connects them to markets and assists them to share crop and livestock production and marketing risks with sponsors.

Contract Farming has also brought to SSFs new openings to generate income. For example, SSFs have been able to enter into markets for high-value horticultural crops (for example, rose flowers, dairy and vegetable production/cropping) that require a high investment.

Information deficit, evidence of inadequate surveillance and appraisal systems in many parts of Africa, makes it almost impossible to measure the achievement of current CF arrangements in improving agriculture and people's living standards [138]. An investigation of Kenya's horticultural industry shows that CF has enabled farmers to raise their incomes more than their counterparts outside CF Arrangements [138]. Embarking on CF in Kenya has also been a job creation opportunity, especially for urban poor women, both at farm level and in cleaning and packaging [138].

## **9. WOMEN'S ACCESS TO CONTRACT FARMING**

Land ownership is a big problem and particularly discriminatory against women in Africa because not many women in Africa own land [139]. Documenting on the gender gap in agriculture, the FAO [140], indicated that as compared to men, women across all developing regions and countries are most likely not to have land on their name, including rented land, and if they do have land, it will be of poor quality and comprising tiny plots. Drawing from most all-inclusive information on women's access to land, the investigation established that women represent only fifteen percent on average of all agricultural landholders in Africa and in addition to being more likely to hold land, men typically control larger land holdings than women [140]. This definitely interprets into a severe gender discrimination/disparity in access to land and has critical repercussions for gendered access to CF schemes in Africa [139].

Additionally, CF is utilised mainly for the growing of cash crops. In African societies, cash crops are typically considered a man’s duty, while females are relegated to look after subsistence crops to feed the household. Some CF companies insist that the farmer must produce a certain volume of a specific crop or type of crops in order to qualify for the scheme [140]. This makes it difficult for women to become CF participants because the restricted land that women have control over is used for the production of subsistence crops to feed the household, including their husbands [141]

The women are handicapped in their participation and joining of formal CF schemes and agreements because of low literacy. They normally depend or rely on their literate husbands or sons to be their representatives when it comes to signing formal contracts that require a minimum level of literacy [140].

As most disadvantaged SSFs and women are not likely to be selected to join CF schemes, these groups are trapped into a painful poverty cycle. A lot of development policies aim to upgradethe livelihood of women and the most underprivileged SSFs in Africa because they need more help [138]. The World Bank believes that productive and successful CF can start as an effective tool for poverty reduction in developing economies

[142].

However, CF firms/companies should look at research work, which was carried out by authors regarding which gender group is more reliable when it comes to payback of loans. For example, a research carried out in Ethiopia [143], discovered that approximately 44% of defaulters were female farmers and fifty-six percent of defaulters were male-headed households.

A number of literature studies have found that females perennially outperform men in terms of paying back loans [144]. For example, Armendariz and Morduch [145] reported that in its initial phase, the Grameen Bank also included male customers; however, the bank decided to move over to a nearly full concentration on women due to repayment problems related to male customers.

Adjognon [139] lists Table 11 the following policy actions to be engaged in order to create and enforce more favourable environment under which the most deprived groups such as women and SSFs can participate and benefit from the CF Arrangements:

However, this paper is not going to discuss in detail the issue of women and CF in this review, this will be dealt with in a different paper altogether.

**Table 11. Policy actions to promote successful contract farming.**

<p>I. National Governments and Development Agencies should work together with agribusiness companies to make sure that participation criteria in CF offer equal opportunities to everybody. Certain political imperative or muscle or requirements should be used to increase openness and commitment from agribusiness companies to purchase from women and SSFs. For example, it may be made obligatory for any agribusiness company that at least a third of its contract farmers should come from a specific underprivileged group. Licenses for operating, as an agribusiness company should be allocated conditionally on compliance to that rule. Definitely, this will raise monitoring and enforcement issues that would be considered more deeply if such a policy were to be executed. Also, knowing that the company seeks particular attributes among its suppliers, Government and Development Agencies may move in to ease transaction costs of contracting with poorer farmers through group creation, agricultural extension, provision of certification services, investment in roads or irrigation and so forth.</p>
<p>II. Land reform programmes that bring change in ownership structure instead of dividing the land into smaller units, must be advanced. For example, it could be possible to allocate land to groups of SSFs collectively, such as through cooperatives. This will avoid dividing the farms into small plots, since the relation with agribusiness buyers is lost with the dismantling of the farm [144].</p>
<p>III. Such lands could be reallocated to SSFs as a group so that the group as a unit can be responsible for a land size big enough to make it profitable to the agribusiness company to deal with them. An internal organisation rule would decree how tasks and benefits would be allocated within the group of SSFs.</p>
<p>IV. Increasing female participation so that they benefit from CF, intra-household relations should be considered by agribusiness companies. Distribution of contracts and payments should be made to the principal workers rather than the heads of the household. This will ensure that women will be able to register into CF in their own name and receive payment for the work that they do. The promotion of literacy among women will also help in increasing their chances to enter into and benefit from CF. This will definitely reduce current and future transaction costs of dealing with rural women CF Arrangements.</p>
<p>V. Contract farmers’ bargaining power also needs to be improved in order to increase their benefit from CF [29]. Therefore, Government and Development Agencies should deter the use of monopoly power by some buying companies and promote education and collective action amongst farmers. For example, government in this way can encourage a lot of business companies to be in the market so that farmers have many alternative companies they contract with, and could set taxes on exports. This will uplift their bargaining power <i>versus</i> the contractor and will avoid situations in which they are manipulated.</p>
<p>VI. Government and Development Agencies should work directly and together toward alleviating the constraints faced by the SSFs in order to reduce the need for CF. As mentioned earlier, farmers in Africa are undergo a set of constraints such as lack of information, poor connection to the market and lack of input and credit, which raise transaction costs of participating in the market. Contract Farming Arrangements are intended to alleviate those constraints and reduce those transaction costs. But if those constraints can be tackled directly by Government and Development Agencies, the need for CF would be reduced. Contract Farming Arrangements are mostly significant only in the early stages of economic development when transaction costs are the highest and its main functions are facilitating transformation from subsistence to commercial farming and stimulating growth and development of the agro-processing industry. But when the market grows and reaches the stage of mass production and spot markets transaction, the market functions well and the importance of CF is somewhat reduced [29]. This means that while CF is helpful for making up for current inadequacies in the agricultural market, it should not be relied upon in the long run. Energies should also be made to directly improve the market for agricultural expansion in Africa. Contract arrangements would then be just a short-term solution awaiting the results of the long-term market development policies that Government and Development Institutions have to plan at present.</p>

VII. Ultimately, it is recommended that Government and Development Institutions support and fund new research methodologies such as randomized control trials in future research to draw definite and credible conclusions regarding the relationship between Contract Farming Arrangement participation and smallholder welfare.

Source: [29, 144].

## CONCLUSION

This section summarises lessons drawn from my review of literature as it relates to this paper. The conclusions are subject to the different results of various case studies which are influenced by specific environments.

(1) The study has concluded that changes in agri-food systems regionally and internationally have created a transformed interest in CF as a supply-chain governance strategy, and that the theoretical framework of transaction cost economics can be used to describe the increasing use of contracts in vertical synchronization agriculture.

(2) The confirmation collected in this research review is pointing out to increasing acceptance of CF and pointed its advancement in the developing world, including Africa, as a tool for agribusiness promotion.

(3) As a policy proposal and involvement, CF, has the capacity to improve the agricultural production by SSFs and their incomes. Findings from literature confirm that contract farmers do better in agricultural production than those that are not participating in CF. This is ascribed to the involvement by contracting companies.

(4) For African countries to get full advantages, there is a requirement for the state and private sector to finance agriculture, both in physical and soft infrastructures, like financial services and research development.

(5) Evidence on the economic and social benefits of CF for SSFs is mixed. The impact of contract innovations to improve farmer outcomes is not easy to evaluate because many aspects can affect farm production output instantaneously. In addition, rapidly moving economic environments require continuous contract enforcement and frequent proper adjustments.

(6) Ton, *et al.* [15] stated that CF is an authoritative procedure that will attract agricultural producers who desire to obtain access to agricultural services or inputs that they find difficult to get in the traditional (spot) market, or reach markets that are more profitable. Comparatively, large and well to do farmers are able to better handle the risks and are therefore, more likely to take part in a contractual agreement.

(7) Saenz-Segura [146] pointed out that, despite the attractiveness of contracts, just having contract arrangements does not guarantee the longevity of the trade relationship. He emphasised that as an institutional model, CF needs to be reviewed continuously in order to do any required adjustments according to internal and external agents and conditions prevailing at that time. Issues to be looked at for adjustments that proved to have a positive efficiency for production and sustainability of co-operation include, non-price aspects in contracts such as frequency of transactions, promissory of back payment, input supply and technical assistance.

(8) Echanove and Steffen, Saenz-Segura [146, 147] analysed power relations between the farmer and sponsoring

company and established that farmer participation in contracts influenced by their lack of other profitable replacements for financing technical assistance and access to markets. The puzzle that remains to be solved pertains to whether SSFs are dictated recipients of the dictated clauses (with only illusory control over production) or if the SSFs may cooperatively relate with other farmers to enhance their bargaining power. The varied outcomes of contracting are influenced by political, economic and cultural variables of that location and the heterogeneity and context of CF make it difficult to synthesise.

(9) Several risks associated with CF that are able to create/cause big damages to the standard of living of the rural people have been identified. Be that as it may, this review has explained some methods that can be taken in order to calm these risks and their impact. The most common danger experienced by SSFs when signing CF agreements is the exposure to legal issues when there is a breach of the contract, the danger of becoming too reliant on or exploited by the contracting company and to receive a reduced price than the one paid for the product in the local market. Issues regarding land tenure and different production methods are also part and parcel of the threats. Some situations concerning risks are when SSFs are barred from CF, if there is a possibility that the company can benefit from its monopolistic position on the market or when farmers breach on the market.

(10) Contract Farming *per se* can support augmenting rural development, and in turn rural livelihoods, however, as with other development projects, it is not a universal solution for poor SSFs in Africa [148]. This review study has shown that CF has positive results in both the short and long term, but there are restrictions for its influence on rural development.

(11) Governments are expected to set up an executive body responsible for settling disputes and solving conflicts. Investments in infrastructure like irrigation, road networks and establishments/institutions are also essential for the agricultural sector and the development of successful contract schemes.

(12) ActionAid [149] concluded that the evidence they gathered revealed that most prevailing CF and out-grower schemes are inappropriate development models to eradicate poverty and hunger. They argue that central government support to agriculture, especially public investment targeted at the poor, SSFs and women rather than partnerships with large private companies, is proven to be one of the most important ways to achieve food and nutrition security and alleviate poverty. However, what is evident from the above observation [149] is the lack of explanation on how to persuade African governments to increase budget allocations to agriculture.

(13) Conclusively, CF is now an integral part and the way forward for African agriculture, especially for the SSFs. However, there is a need for adjustment and perfection to be made in order for CF to be more profitable and everlasting for both the farmer and investor. This can be achieved by full government support via political stability, pro CF legislation

(policy issues), land tenure and policy issues (Table 11 depicts policy actions to promote successful CF).

## RECOMMENDATIONS

Contract Farming is a container idea that involves an extensive variety of vowed schedules, which makes it difficult to draw exceedingly general conclusions. This does not have to change if more research studies are available. It may be necessary to analyse new research/reviews to gauge the income effects in specific instances of CF, particularly when it evaluates the effects of various well-specified service packages.

At the initial stage of all CF arrangements, it is necessary that both contractors and SSFs have a clear understanding of the concept and roles they play in an agreement. Rigid contracts are untenable, SSFs do not fully understand concepts, standards of quality, or loss due to late or untimely delivery [150].

Ton, *et al.* [15] offer some recommendations for future research on CF (Table 12):

Contracting agribusinesses essentially need to sensitise SSFs about CF since most of them lack understanding of its existence, operations, and benefits [40]. They may choose direct forward production contracts with farmers to reduce incidences of side-marketing and then assist contracted farmers to buy the necessary inputs at realistic prices. It is also imperative for agribusinesses to offer extension services to SSFs to improve farm productivity, to encourage crop rotations and quality of products as well as educate agents about ethical business practices, particularly on the importance of being honest with farmers on weights and payments [1].

Fearing that CF, if promoted only where farmers have abundant alternatives, may lead to segregation of poor farmers, Glover [12] states that the availability of substitutes is one of the most important prerequisites for a CF situation that benefits SSFs. According to Rehber [20] monopsony power is abused when substitute marketing opportunities are closed and an excessively integrated company or sector may beat the terms of the contract. In India, for example, in many cases, the companies that have contracts with SSFs in crops have alternative outlets in spot markets like potato, tomato, chili, and cotton [3]. Companies and farmers take this factor into account in the pricing structure of contracts that a prior cannot be considered 'prejudicial' or 'manipulative'.

Glover [149] states that SSFs must be inspired to uphold other sources of income and companies must not constrain farmers from growing alternative crops. Another study shows that [38], substitute production possibilities can ensure a

greater share of benefits being passed on to SSFs. The contract farming should then only be advocated as a second or third crop.

Key and Runsten [21] argued that alternative production and income possibilities strengthen the bargaining power of the SSF. They preach that companies favour SSFs who have reduced production openings so that their bargaining power is somewhat greater.

The provision of alternative options to growers by itself is not an antagonistic recommendation. Nonetheless, one must query who is to offer such alternative options especially in nations that have removed state-controlled marketing through closing down marketing boards [1]. In other words, is it not CF being recommended to instil dynamism in the agricultural sector in a more liberalized economic environment since alternatives could be scarce? If a monopsonist keeps grower profits at a level just above their reservation utility (this can be understood as the expected utility from profits the farmer believes he can get by putting his land to an alternative use, less search costs), then providing alternative opportunities advocate CF a rather unnecessary exercise [21].

Policy architects are also recommended to put in place the contractual laws that will govern contracts for forward production and marketing amongst investing companies and SSFs, in addition to creating and reinforcing the contract establishments for the protection of both investing companies and farmers from possible extra-contractual problems [21]. It is necessary to encourage out-of-court settlements in dispute resolution, as it is quick and cheaper, making use of non-governmental organisations and industry representatives as arbitrators.

Another policy proposal that has often been made in the literature is for combined bargaining through farmers' cooperatives. Growers' organisations augment the bargaining power of contract sellers in negotiating the terms of contract, which in essence is a bargaining game with an indeterminate outcome and such organisations act as a countervailing force to the monopsonist [20].

Singh [9] particularly calls for brokering cooperatives or other producer organisations to negotiate unbiased contracts. He also sees the reason for intermediation by the state, non-governmental organisations and community organisations to protect the farmer. According to Sriboonchittin, [151] SSF cooperatives could be a solution to the uneven capturing of value added by monopsonistic buyers since cooperative profits would ultimately go to its members. Making the same case for communal bargaining, Key [21] argues that a grower's union that can monopolise product supply could potentially extract profits from corporations.

**Table 12. Recommendations for future research on contract farming.**

<p>♦ In order to acquire understanding into the enablers and obstacles of efficacy and drop-out dynamics and to counteract for the ostensible publication and survivor prejudice in the prevailing knowledge based on CF, new investigations should be conducted to report the less-successful occurrences of CF and inadequate results. The investigation should start earlier ensuring to cover the running and dynamics of CF in the initial years.</p>
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◆ In addition to revenue effects, other consequences of CF are important to assess or review. Apart from food and nutrition security effects, the function of CF in rural development, such as modernization and livelihood strength, needs more research. Preferably, new analyses should rely on collective pointers and enquiries that progress the comparability of conclusions between studies. This should be doable to accomplish, as most surveys in their review used fairly similar conclusion areas and characteristics. National appraisals or agricultural censuses should include questions on the service packages available to SSFs as well as the source of funding for the service delivery, to get a better idea of the importance of CF in agriculture.

Source [15]:

It is required for agribusiness companies to use applicable prices (spot or forward), which are impartial to both parties. There is a requirement for additional training of SSFs so that they can improve skills in negotiating for good prices for their commodities. There is a need to organise farmers into groups to augment their bargaining power in dealing with contracting companies that are often monopsonies or oligopsonies that have high market power. Besides, SSFs need to be well-read in the importance of CF and the need to abide by agreed-upon contracts. The inducements provision to agribusinesses that include and promote CF in their strategies, is supreme. Research and development, and extension activities related to crops being promoted by CF must be fully supported. It is also necessary to create mutual trust between farmers and promoters through frequent interaction and information sharing regarding costs and market prices.

Lack of uniformity in the regulations and laws of many African states hamper full access of SSFs' to the markets. Governments are urged to advance the establishment of identical policies and laws; especially those that eliminate trade barriers.

Companies need to consider the political stability of the country where they are setting/operating business. Sometimes, there is a threat of CF operational disruption when politically connected farmers become unhappy with the company. Another possible scenario is political authorities' interest to gain popularity (vote buying) while jeopardizing the contract agreement.

The farm/land assessment is crucial because sidestepping any single issue could imperil the success of the CF programme. The climate, soil and lay of the land must be suitable for the achievement of commercially viable yields. For example, frost prone areas can destroy or reduce yields of some crops. The pH in the majority of smallholder farms is low; therefore, the investing companies may consider the provision of a liming programme or utilising crops that are tolerant to acidic soils. If irrigation is considered, there must always be adequate water to meet crop requirements. The farm should be analysed for any hazards from disease, pests or vermin, for example. The previous non-observance of crop rotations could have increased the incidence of nematodes.

Big processors, exporters, or sometimes chains of supermarkets must be encouraged to organise CF operations. Therefore, an investment environment that capacitates private investment in agribusiness sectors is a necessary pre-condition for the development of private CF schemes. This improved climate involves cutting unreasonably high capital

requirements to start new companies, restructuring registration procedures, limiting licensing requirements to sectors in which public health or safety is an issue, for example, pesticide distribution, developing a fair and clear tax code, simplifying customs clearance procedures, adopting a modern commercial and legal code and lessening corruption.

It is quite obvious that despite all of its great potential to fuel economic growth, CF is not spontaneously geared towards the most deprived farmers because of the high transaction costs involved. For as long as the most disadvantaged farmers are excluded from CF schemes, the only way CF can participate in poverty alleviation is through generating labour employment on farms and processing plants rather than having a direct effect on SSFs [140]. Actions that need to be taken in order to create and enforce conditions under which the most deprived groups and SSFs can participate in and benefit from CF arrangements are listed in Table 13 as follows:

Employment of extension staff (both government and private) in CF is critical for its future improvement as they are the key connection between contractors and farmers. Contractors must, therefore, coordinate with extension staff prior to the introduction of contracts and educate farmers to arrange projects for them. Extension staff will then supervise development throughout the farming season and farmers will be able to report locally any challenges, for example, pest and disease incidences. This kind of technical support and close monitoring will certainly improve the quality of farmers' produce. It may discourage cases of side-marketing or rerouting inputs for other uses by farmers. Timely provision of inputs, collection and transporting of harvest is crucial for a successful venture.

Farmers must collect enough information and understand the terms of the contract before committing to CF. They must adhere to contractual agreements despite the lure to side-market the product due to higher prices elsewhere. Small-scale farmers should take advantage of such openings and learn new technical skills to produce high quality product for the market. It is commended for farmers to be associated with farmer associations in their community.

Contract farming is seen as a resource for developing markets and technical skills in a way that is money-spinning to the farmer and the contractor. Agricultural extension staff has a responsibility to accomplish in order to ensure that farmers and contractors should understand the factors that affect the viability of CF. They must have good comprehension of crops or animals under the specific contract. Furthermore, they must have effective communication skills to organise and administer

**Table 13. Actions to encourage deprived ssfs to participate in contract farming.**

<p>◆ Government and Development Partners should work together with agribusiness companies to guarantee that membership criteria offer equal opportunities to everyone interested in CF. Some political essentials or requirements could be used, that increase openness and obligation from agribusiness companies to purchase from women and SSFs. For example, it may be made obligatory for any agribusiness company that at least a third of its contract farmers should come from a specific deprived group. Moreover, licenses for operating as an agribusiness company should be apportioned conditionally on fulfilment of that rule. This will undoubtedly raise some examining and implementation issues that would be considered more deeply if such a policy were to be implemented. Additionally, knowing that the company looks for certain characteristics among its suppliers, Governments and Development Agencies may step in to decrease transaction costs of contracting with poorer farmers through group creation, agricultural extension, provision of certification services, investment in roads, irrigation and all necessary infrastructure.</p>
<p>◆ Land reform initiatives/programmes should be permitted that bring change in ownership structure instead of dividing the land into smaller units, for example, it could be possible to distribute land to groups of farmers collectively, such as through cooperatives. This will prevent taking farms to pieces, since the relation with agribusiness buyers is lost with the undoing of the farm [146]. Indeed, since companies discover that it is expensive to deal with individual SSFs with very small land plots, land could be redistributed to farmers as a group so that the group as a unit can be responsible for land size big enough to make it profitable to the agribusiness company to deal with them.</p>
<p>◆ To increase women's participation and benefit from CF, agribusiness companies should take intra-household relations into account. Apportionment of contracts and payments should be made through the principal workers rather than the heads of the households. Thus, women will be able to register into CF in their own name and receive payment for the work that they do. Promoting literacy among women will also help in increasing their chances to enter into and benefit from CF.</p>
<p>◆ Participant farmers' negotiating power also needs to be augmented in order to increase their value from CF [29]. To this end, Government and Development agencies should deter the use of monopoly power by some agribusiness companies and encourage education and collective action amongst farmers. For example, the government could set taxes on exports in a way that encourages many agribusiness companies to enter the market so that farmers have many alternative companies they can contract with. This raises their bargaining power versus the contractor and will avoid situations in which they are manipulated.</p>

Source: [146, 29]

cropping and livestock schedules and buying procedures fairly and honestly and be well versed with the understanding of social customs, farming practices and language of the communities they work with. Extension staff must not participate directly as farmers in Contract Farming arrangements. Both government and private sectors must not allow this.

Availing and facilitating SSFs with access to long-term sources of finance and areas of policy intervention is paramount. The banking and insurance systems have a responsibility to play in agriculture and investment banks could use the existing SSFs groupings and agriculture marketing cooperatives and warehouse receipt system to lend to farmers. The African governments could expedite the release of customary land titles for them to be used as collateral. Related to this is fast tracking the establishment of, and access to, crop insurance schemes to reduce related risks to crop failure due to unfavourable weather conditions and the outbreak of diseases. Other measures include, accelerating operationalisation of agriculture banks and strengthening credit guarantee schemes.

It is very necessary to improve the quality of feeder roads in the areas surrounding the schemes in order to guarantee accessibility throughout the year. This should build on the ongoing governments' efforts to improve roads that connect the districts.

With the current effects of climate change and erratic rainfall, governments in collaboration with other stakeholders should consider establishing irrigation schemes. Such moves would require synchronising the infrastructure demand with the priorities set under agriculture development plans which translate the objectives into actionable programmes at district and local levels.

Finally, further research studies are required to find methods to wean-off SSFs from perpetual CF arrangements so that they stand independently when it comes to funding and marketing of their agricultural production.

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#### CONFLICT OF INTEREST

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