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Introduction

Contract farming (CF) is an arrangement between farmers and a processing or marketing firm for the production and supply of agricultural products, often at predetermined prices.¹ Farmers are responsible for producing specific quantities of a good at a certain level of quality and agricultural firms are responsible for purchasing the commodity, often also providing inputs and technical assistance.² EPAR Technical Report #60, *Smallholder Contract Farming in Sub-Saharan Africa and South Asia*, reviews the empirical evidence on CF and finds that the economic and social benefits for smallholder farmers are mixed.³ This literature review complements that work by specifically examining the impacts and potential benefits of CF for women in Sub-Saharan Africa (SSA).

The literature on gender and CF in SSA falls into two broad categories: the determinants of female participation in CF schemes and the impact of CF on women's welfare within the household. A significant portion of the existing work relies on *ex post* case studies, although there is also an emerging literature addressing best practices in contract design and implementation. *Appendix 1* provides a summary of CF case studies that include a gender component.

Overall, our review suggests that involvement in CF often prompts a shift in household production strategies. The literature suggests that women's direct participation in CF is limited. Limited access to land and control over the allocation of labor and cash resources are key constraints hindering women's ability to benefit from CF. The impact of CF on women is often mediated by their relative bargaining power within the household.

Contracting with Female Farmers

The dominant finding throughout the CF literature suggests that women are generally not involved in contracting with agro-industrial firms and are disadvantaged in contract schemes, particularly

¹ Eaton, C. & Shepherd, A., 2001, p. 2

² Little, P. & Watts, M., 1994, p. Introduction

³ Bijman, J., 2008, p.1

where the scheme involves land redistribution.⁴ For example, in their study of South African contract barley farmers, Porter and Philips-Howard (1997) found few women had farming contracts. The authors similarly found that in sugar farming contracts, women held less than half (30 of 70) of the contracts despite providing the majority of the labor on 60 to 70 percent of the contracted plots. Under the loan conditions prevalent at the time of the study (1994), men held the contract unless a woman had no husband although there were two cases where a woman objected to this arrangement resulting in a sugar farming contract transfer to the woman.⁵

A few studies suggest that participation in CF in the 1980s involved women. Watts (1988) found that 70 percent of small farmer participants in the Njoro vegetable-canning scheme in Kenya were women. In this case, French bean cultivation was integrated successfully with existing farming systems and caused little disruption in women's household food production responsibilities.⁶ Little (2000) notes that in The Gambia in the 1980s, firms often contracted vegetables from women's communal gardens in the late 1980s but in the following decade, firm preference shifted to contracting with mostly male small commercial farmers or large export growers.⁷

A few more recent studies also find high levels of female involvement in CF. In a study of non-traditional vegetable exports in Zimbabwe, women accounted for 62 percent of contract farmers in the studied firm, which was representative of the overall gender distribution of the firm's farmers.⁸ Strohm and Hoeffler (2006) similarly found that 80 percent of the contracted farmers were women in one of three contract sites of a French bean contracting firm in Kenya. The study did not mention the gender of the farmers at the other sites.⁹

Studies in Kenya of the tea and horticulture sectors also found low levels of female involvement in farming contracts. Dolan (2001) found that fewer than 10 percent of contracts in the fresh fruit and vegetable sector were with female farmers.¹⁰ Similarly, among tea growers von Bulow and Sorensen (1993) found that the Kenyan Tea Development Authority (a government supported entity) issued tea licenses (contracts) exclusively to male household heads based on their title deeds to land, thereby excluding women for lack of formal land ownership. Women were further hindered by credit schemes and extension services oriented towards male farmers, and because payments were made directly into the license holder's bank account and few women held their own personal accounts.¹¹

As in Kenya, studies in Uganda, Malawi and Senegal all observed little or no female participation in a variety of CF arrangements. In a study of rice, sorghum, and sunflower schemes in three regions of Uganda, Elepu and Nalukenge (2007) observed low involvement of female farmers. The authors

⁴ Porter, G. & Philips-Howard, K., 1997, p. 233

⁵ Porter, G. & Philips-Howard, K., 1997, p. 233

⁶ In Porter, G. & Philips-Howard, K., 1997, p. 233

⁷ Little, P. 2000, p. 8, 11, 12

⁸ Masakure, O. & Henson, S., 2005, p. 1725

⁹ Strohm, K. & Hoeffler, H., 2006, p. 16

¹⁰ Dolan, C., 2001, p. 44

¹¹ Von Bulow, D. & Sorensen, A., 1993, p. 41

suggest that this could be a result of the fact that most households are male-headed or could result from the traditional predominance of male farmers in cash crop production in the areas and crops studied.¹² Similarly, in a study of a smallholder sugar authority scheme in Malawi, Nankumba and Kalua observed only one female grower (a widow).¹³ In French bean exports in Senegal, Maertens and Swinnen (2009a) found that no female-headed households were involved in CF; the study did not specify who held the contract in dual-headed households.¹⁴

Impact of Household Contract Farming on Women

In general, the CF literature suggests that the unitary model of household decision-making does not adequately describe the process of household decision-making. Instead, the literature suggests that farming contracts can cause intrahousehold conflict through the reallocation of productive resources, changes in labor burdens, and decisions about control over cash income.¹⁵ Eaton and Sheperd (2001) assert that good management of CF implementation requires paying attention to male-female household relationships in order to mitigate possible negative unintended consequences. They identify payments made to men for work carried out largely by women and conflict between contract requirements and women's subsistence farming priorities as two key challenges to CF.¹⁶ The authors suggest that program planners should attempt to allocate contracts and make payments to the principal workers rather than the household heads. They note that in the Tea Development Authority scheme in Kenya, the firm alienated female farmers and contributed to widening the gap between resources controlled by men and those controlled by women by favoring male household heads when granting contracts.^{17,18} While contracting with the principal workers may not be possible in all contexts, the literature suggests that contract design should more carefully account for how profits are distributed in relation to contribution and work effort.¹⁹

These intrahousehold concerns appear repeatedly in the literature. Among tea growers in Kenya, von Bulow and Sorensen (1993) observed that women provided labor for their husband's tea fields with the understanding that the income from those fields would be used to benefit the entire family. Conflict arose when many husbands instead spent the money on personal needs.²⁰ Dolan (2002) found that as export horticulture crops (especially French beans) became increasingly lucrative in Meru District, Kenya, the land allocated to a traditionally woman's domain (vegetables) was increasingly appropriated by men who laid claim to the land allocated for and the income derived from French bean cultivation.²¹ Also in Kenya, Carney & Watts (1990) observed that tobacco

¹² Elepu, G. & Nalukenge, M., 2007, p. 10

¹³ Nankumba, J. & Kalua, B., 1989 in Porter & Philips-Howard, 1997, p. 233

¹⁴ Maertens, M. & Swinnen, J., 2009a, p. 166

¹⁵ See Quisumbing, A., & Maluccio, J., 2000

¹⁶ Eaton, C., & Sheperd, A., 2001, p. 85, 102-103

¹⁷ Eaton, C., & Sheperd, A., 2001, p. 103

¹⁸ Von Bulow, D. & Sorensen, A., 1993, p. 41

¹⁹ Eaton, C., & Sheperd, A., 2001, p. 103

²⁰ Von Bulow, D. & Sorensen, A., 1993, p. 46

²¹ Dolan, C., 2002, p. 660

contracts created intrahousehold conflicts over the allocation of land and resources to tobacco and away from subsistence crops, specifically millet.²²

Women's Land Access Constraints Impede Participation in Contract Farming

Similar to the constraints facing female smallholders in all farming arrangements, women's lower rate of land access and ownership is mentioned throughout the literature as a critical barrier to their ability to engage in CF.²³ Maertens and Swinnen (2009b) attribute the exclusion of female contractors in high-value CF schemes to their limited access to productive resources, especially land and labor. As Dolan (2001) found, the desire to minimize the risk of contract default due to production failures drives firms' preference to contract with men, whose more secure access to land and labor decreases this risk.²⁴ This excludes women who have fewer rights to land and less authority over household labor allocations.²⁵ Eaton and Shepherd outline a set of preconditions for contract initiation, including secure land tenure, that they argue should be met in order to decrease breaches of contract by both farmers and firms.²⁶ Further, the authors note that in the majority of projects, firms contract directly with farmers who either own land or have customary land rights within a communal landowning system.²⁷

Impact of Contract Farming on Technology Adoption

No studies were found addressing the impact of CF on women's technology adoption. However, in a recent study, Sanyang, Kao and Huang (2009) examine an intervention introduced by the Taiwan Agricultural Technical Mission to organize female vegetable growers in The Gambia into marketing groups. The intervention provided production and marketing training, increased input supply, and conducted field demonstrations. The authors evaluate the impact of the intervention on the women's net profits, funds accumulated, and persisting constraints. Through farmer surveys, the study posits that the intervention significantly contributed to the socio-economic development of women vegetable growers as measured by output volume and net income of the vegetable marketing groups.²⁸ The study did not measure whether this transfer had 'spillovers' to the production of other crops.

Current Research in Contract Farming

The Institutions and Infrastructure for Market Development program at the International Food Policy Research Institute (IFPRI) is currently working on a "Contracting Out of Poverty" project intended to design new institutional mechanisms to provide smallholders with access to dynamic (high value) markets through efficient CF arrangements. They are developing contracts to test in

²² In Eaton, C., & Sheperd, A., 2001, p. 22

²³ Doss, C. R., 1999

²⁴ Dolan, C., 2001, p. 55

²⁵ Maertens, M. & Swinnen, J., 2009b, p. 9

²⁶ Eaton, C., & Sheperd, A., 2001, p. 28-29

²⁷ Eaton, C., & Sheperd, A., 2001, p. 34

²⁸ Sanyang, S., Kao, T., & Huang, W., 2009, p. 178

Vietnam, Tanzania, and Peru to illuminate which contract structures may or may not work under certain conditions. Additionally, the project will also measure improvements to overall farmer welfare in terms of income and poverty levels. This project will select rural communities based on typologies of micro-regions to serve as a scaling-up device for the results of the project.²⁹

Another current project is the Food and Agriculture Organization of the United Nations' (FAO) online "Contract Farming Resource Centre" with a library of scholarly and gray literature regarding CF, a toolkit, and several best-practices presentations.³⁰ With the exception of a few articles included in the FAO resource center's library, neither of these projects appears to address gender in CF or the unique experience women face in CF arrangements.

Areas for Further Research

Sex-Disaggregated Data

The need for sex-disaggregated data is underscored throughout the body of work addressing issues facing women in rural developing areas. As Maertens and Swinnen (2009a) propose, there is a general agreement in the CF literature on the need for more research and better empirical evidence to quantify the effects of CF and modern supply chains on women.³¹

Rural Labor Markets

Evidence suggests that increasing CF opportunities in rural areas is also changing rural labor markets and opportunities for off-farm work. Maertens and Swinnen (2009a) show that fresh fruit and vegetable exporting companies in Senegal responded to increasing quality standards in the last decade by consolidating and strengthening vertical coordination at different levels of the supply chain. While this has resulted in a shift away from smallholder CF and toward more large-scale agro-industrial production, the authors suggest that the smallest farmers and the poorest households have benefitted from this restructuring. Specifically, the authors find that a greater number of households share in the gains from high-value fresh fruit and vegetable export production – increasingly from labor market participation rather than from contracted own farm production. Furthermore, they note that poorer households benefit from these rural employment opportunities more so than from CF.³² Similarly, in another study these authors found that the growth of modern horticultural supply chains has directly benefitted rural women in Senegal, more through employment opportunities in large-scale production and agro-industrial processing than from smallholder CF.³³ Based on these findings, they argue that more research is required to assess the impact of changes in rural labor markets on women including participation constraints, bias against hiring women, and the effect of women's wage employment income on the household allocation of resources.³⁴

²⁹ Available from <http://www.ifpri.org/book-744/node/5373>

³⁰ Available from <http://www.fao.org/ag/ags/contract-farming/index-cf/en/>

³¹ Maertens, M. & Swinnen, J., 2008, p. 3; 2009b p. 15

³² Maertens, M. & Swinnen, J., 2009a, p. 174

³³ Maertens, M. & Swinnen, J., 2009b, p. 1

³⁴ Maertens, M. & Swinnen, J., 2008, p. 25

Conclusions

The majority of the literature on women and CF examines how limited access to land and control over productive resources excludes women from CF. Negative effects on women in CF households are also documented, focusing mostly on the shift in roles and responsibilities arising from a change in household production strategies that may increase women's labor burden or decrease bargaining power. No data were found to assess the impact of CF on women's technology adoption. Further research and sex-disaggregated data is necessary to quantify the opportunity CF presents for women and the impact of household CF on women.

Literature Review Methodology

This literature review was conducted using Google Scholar, the FAO Contract Farming Resource Center, the World Bank Study on Competitive Commercial Agriculture in Africa (CCAA) as well as several NGO and institutional websites including IFPRI, the World Bank, and the FAO. Search terms included "contract farming," "outgrower," "vertical integration," "contracting smallholders," and "agribusiness;" these terms were then searched in combination with "women," "gender," "Africa," "labor relations," and "technology adoption." The methodology also included searching for sources that cite identified central works and examining relevant lists of works cited.

Please direct all comments or questions about this research to Leigh Anderson, at eparx@u.washington.edu

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Appendix 1. Case Studies of Contract Farming Schemes Including a Gender Component

Author	Year	Location	Sector/Crop (Contracting Company)	Key Takeaways	Notes
Anim, Raphala & Mandleni	2009	Northwest Province, South Africa	Sunflowers	<ul style="list-style-type: none"> • Authors argue that there was no farm ownership bias or contract entry barrier by gender in the study area, but the majority of farmers were male; women farmers accounted for 11 percent of contracted farmers and 22 percent of non-contracted farmers (p. 194) 	
Maertens & Swinnen	2009a, 2009b, 2008	Senegal	Fresh fruits & vegetables/high-value horticulture: French Beans, cherry tomatoes	<ul style="list-style-type: none"> • Female farmers are mostly excluded from holding contracts (French beans: 1 in 59 farmers was female) (2008, p. 12) • Senegalese women do not have access to irrigation infrastructure (a critical input for French beans) (2008, p. 13) • Women benefit less from contract farming and product markets than from employment opportunities as a result of the labor market effects of the growth of modern supply chains (2008, p. 18) 	
Kudadjie-Freeman, Richards & Struik	2008	North-east Ghana	Sorghum: Kapaala variety (Guinness Ghana Brewery)	<ul style="list-style-type: none"> • Only 20% of contract holders were women (p. 5) • Contracts were informal (p. 8) • Scheme failed in first 	Sample size unknown

				year due to inappropriate technology, technical problems, and lack of formal obligations and responsibilities (p. 2)	
Elepu & Nalukenge	2007	Soroti, Apac, and Bugiri Districts, Uganda	Sorghum (Soroti), Sunflower (Apac), Rice (Bugiri)	<ul style="list-style-type: none"> • Low participation of female farmers in all three schemes (p. 10) • Sorghum: 12.3% female contract farmers, 12.9% female non-contract farmers • Sunflower: 15% female contract farmers, 28% female non-contract farmers • Rice: 30% female contract farmers, 18% female non-contract farmers 	Unpublished draft
Strohm & Hoeffler	2006	Kenya	French beans (Frigoken)	<ul style="list-style-type: none"> • Murang scheme (farmers are contracted in groups based on selective criteria): 80% of farmers are women (p. 16) 	Non-random sampling & small sample size
Masakure & Henson	2005	Zimbabwe	Horticulture: vegetables (Hortico Agrisystems)	<ul style="list-style-type: none"> • 62% of farmers in the study were women, representative of the gender profile of contract producers (p. 1725) • Strongest motivation for contracting with Hortico: additional income (p. 1727) 	
Dolan	2001	Meru District, Kenya	Horticulture: French beans	<ul style="list-style-type: none"> • Over 90% of contracts are issued to male farmers because firms prefer to contract with landholders – women are effectively excluded because their land rights are usufruct rather than statutory (p. 	

				<p>44)</p> <ul style="list-style-type: none"> • The entrance of horticultural contract farming engendered conflict over rights, obligations, and resources in the area (p. 64) • Women's work has increased and their control over horticultural production has weakened (p. 64) 	
Little	2000	The Gambia	Vegetables	<ul style="list-style-type: none"> • Late 1980s, contracting vegetable farming from small "garden plots" (mostly with women) was common • Early 1990s saw a shift in preference to contracts with small commercial growers (mostly male) 	Secondary analysis
Von Bulow & Sorensen	1993	Kenya	Tea	<ul style="list-style-type: none"> • Tea was introduced as a male cash crop • Women refused to provide labor on tea fields when the income was not used to benefit the entire household; men who could not afford to hire labor left fields (partially) untended, some defaulted on contracts 	Secondary analysis
Carney; Carney & Watts	1994; 1990	The Gambia	Rice	<ul style="list-style-type: none"> • The introduction of rice contracts requiring dramatic changes in labor and resource allocation led to intrahousehold conflict, specifically over access to and control over land 	Secondary analysis