FULL LENGTH RESEARCH PAPER

Perceived effects of insecure land rights on rural women's roles in household food security in Okigwe agricultural zone of Imo State, Nigeria

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Accepted 30 June, 2016

This study analyzed the effects of insecure land right on rural women roles in household food security in Okigwe Agricultural zone of Imo state, Nigeria. The specific objectives were to; describe the socioeconomic characteristics of the respondents, identify the various tenure right systems prevailing in the area, describe rural women's role in household food security and determine perceived effects of insecure land right on rural women's role in household food security. Simple random sampling technique was used to select 130 respondents from the list of women farmers obtained from Extension Agents in the zone. The data collected with questionnaire were analyzed using percentages, frequency distribution tables and mean scores. Result showed that the mean age of the respondents was 51; respondents are married with over seventy five percent (75%) educated, mean household size of 8 persons and small farm size with a mean of 0.7ha. Majority of the respondents were into farming (crop and animal production) and non-farming activities. The existing land tenure systems majorly in the area were inheritance and communal. Most respondents indicated acquiring land from husband. The respondents right to land was indicated majorly to include use right. Insecure right to land greatly affect agricultural productivity, employment opportunities, long-term agricultural investments, income generation, household food supply, access to credit facilities, daily food intake and women's use of land. The effects of land insecurity on the rural women's roles were perceived to be high. Therefore, it was recommended that there is need to encourage women farmers who greatly partake in agricultural activities by enacting favourable policies to secure their right to land, education campaigns to increase their knowledge-base in farming and providing support services such as credit and insurance schemes.

Key words: Land, land right, food security, women, household, Imo State.

INTRODUCTION

Land is a precious resource. According to Food and Agricultural Organization estimates, almost 80 percent of the world's undernourished people live in rural areas and most depend on land for agriculture, including livestock, for their livelihoods (FAO, 2009). Land also secures the production of food for people not directly involved in agriculture, and is needed for a myriad of other purposes, including infrastructure and human settlements. At the same time, land is a finite resource. There is substantial evidence that access to land for the rural poor is essential for food security and economic development in

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developing countries. Such evidence applies to a large number of different countries and socio-economic situations. The basic assumption that access to land is an effective tool for poverty reduction is shared by international organizations, academic researchers and NGOs alike (De Shutter, 2010).

In developing countries, most farms are relatively small. Reports from different countries indicate that the average size of a land holding in developing countries is between half a hectare and a dozen hectares (Arnold, 1990). While the majority of farmers in developing countries are small-scale farmers, the latter do not hold the biggest share of agricultural land. Instead, a major share of land is in the hands of relatively few landowners (Environmental Defense, 2002). While small farmers use the land to secure their livelihood and engage in subsistence farming, large-scale, high-input, export-oriented, commercial farming is also a significant economic sector in many developing countries. The agricultural system, including the production of primary goods and commodities, marketing and retailing, is estimated to account for more than 50% of the GDP in developing countries (Wilkinson et al, 2009). Notwithstanding the important economic role of large-scale commercial, farming in developing countries, countries with a more egalitarian distribution of land tend to be characterized by higher levels of economic growth. Such distribution also tends to have positive social impacts, such as higher literacy rates (Deininger, 2003).

Land is a primary and critical factor of agricultural production and expansion of livelihoods opportunities in Africa. Secure access to land affects production and productivity in all sectors of agricultural production. Without equitable and secure access to land by the majority of farmers in Africa it will be difficult to achieve food security. African governments have to appreciate that transforming agrarian systems into urban industrial economies invariably requires fundamental changes in many institutions, including those of land tenure. There is growing evidence that agricultural growth and efficient management of natural resources are dependent on the political, legal, and administrative capabilities of rural communities to determine their own future and to protect their land and land-based natural resources and other economic interests.

The lack of this power (or lack of democracy) is translated into insecure tenure rights, abuse of common property and resources, dis-enfranchisement of rural people, particularly women, and the breakdown or weakening of rural economic institutions. According to Rukuni (1999), the management of the environment and the effectiveness of community based natural resources management are all dependant on clearly defined land rights and support systems for rural communities.

Women play a vital role in advancing agricultural development and food security (FAO, 2011). They participate in many aspects of rural life; in paid employment, trade and marketing as well as many unpaid activities, such as tending to crops and animals, collecting water and wood for fuel, and caring for family members. Women also manage household consumption and food preparation. Doss, et al., (2008) asserted that women face many constraints in the multiple activities they pursue – less land ownership, access to credit, extension and other services, and ability to hire labour. Too often, these constraints as well as women current and potential contributions to agricultural production go unrecognized.

Increasing opportunities for women can have a powerful impact on productivity and agriculture - led growth. Women are just as efficient agricultural producers as men and can achieve similar yields when given equal access to resources, including training and services. For example, in Kenya, researchers found that women could increase their crop yields by approximately 20 percent if given the same access to the same resources as men (Saito et al., 1994). In Burkina Faso, it has been estimated that overall household production could increase by about 6 percent by more equitably distributing fertilizer and labour between male and female - farmed plots (Udry & Christopher, 1996). The Food and Agricultural Organization of the United Nations (FAO) estimated that if women had the same access to productive resources as men, they could increase yields on their farms by 20 - 30 percent. This increase could raise total agricultural output in developing countries by 2.5 - 4 percent and reduce the number of hungry people in the world by 12 – 17 percent, up to 150 million people (FAO, 2011).

When women's productivity and incomes increase, the benefits amplify across families and generations. Women tend to devote a larger fraction of their income to their children's health and nutrition, laying the foundation for their children's lifelong cognitive and physical development (Duflo & Esther, 2003). In Nepal, for example, the children of women who own land are twice more likely to be adequately nourished than children in households where women work on family land they do not own or children growing up in landless households (Allendorf and Keera 2007) mothers who own land are better able to provide more nutritious food to their children and ensure their health and well-being.

Land in Africa is used for many activities; agriculture and forestry, urban expansion including transportation, mining and oil extraction, tourism and recreation; and also as a sink for domestic and industrial waste. It provides material resources for livelihoods, food and health, provides security against environmental shocks and future uncertainties, and underlies many social and cultural systems. Therefore, access to land and the resources it offers is at the core of enhancing opportunities and choices, particularly for those who depend more directly on it (Economic Commission for Africa, 2003).

Land is a key factor in sustainably managing the environment for development in Africa, but there are many challenges to be overcome. The region has sufficient land resources to produce enough food to feed its people and yet one in three people in the region is undernourished. Increasing presently agricultural production which is the dominant economic activity in most parts of the region is the key to addressing extreme poverty and hunger. Land in Africa is a social, economic and environmental good, and as long as all the ingredients critical to achieving the MDGs through the available land resources are rationed, the goals will remain a fantasy (SADC, 2010).

The importance of stronger tenure rights, with related improved governance system as the basis for

improving sustainable management and enhancing opportunities can thus not be overemphasized. Tenure regimes, access and equity issues, poverty alleviation and gender dimensions all shape governance and the opportunities available at different levels. Governance today will have important implications for the opportunities of future generations, either enhancing or foreclosing choices. In many countries where land is very unequally distributed land reform is a basic requirement, whilst in some cases issues of use, administration become critical. Achieving equitable land access is integral to the protection and enforcement of land rights for marginal groups. Without legally protected right to land vulnerable low income households are unable to defend land claims and positively engage in disputes over land tenure. Failure to administer rights granted to secure land access has been a prime factor in rising land insecurity for the rural poor. Greater tenure security is expected to strengthen income growth and asset status for the poor and ensure livelihoods resilience whilst strengthening the ability to access credit and compete in domestic and global markets (FAO, 2006a; FAO, 2006b).

Kendall-Hunt (1994) however asserted that while strong and secure land rights are the norm for farmers in the developed world, this is not the case for much of the developing world. Secure rights to land refer to rights that are clearly defined, long-term, enforceable, appropriately transferable, and socially and legally legitimate. Unfortunately, a substantial portion of smallholders in developing countries are missing at least one of these key components of strong land rights. While there are many studies of land access with focus on the determinants of land rental market participation in numerous countries, the relationship between land right rights/access and food security as it concerns women has not been well explored in the literature. This thereby necessitates the study.

The broad objective of the study was to analyze the effects of insecure land right on rural women roles in household food security as perceived in Okigwe Agricultural zone of Imo state. The specific objectives were to:

- Describe the socioeconomic characteristics of the respondents,
- Identify the various tenure right systems prevailing in the study area,
- Describe rural women's role in household food security,
- Determine perceived effects of insecure land right on rural women's roles in household food security.

METHODOLOGY

This study was carried out in Imo state, Nigeria. Imo State is situated east of River Niger in the South-Eastern part of Nigeria. It is made up of twenty-seven (27) Local Government Areas and its capital is Owerri. It lies within longitude 6°50E to 3.35E and latitude 4°30N to 6.30N. The state is divided into three (3) senatorial districts of Owerri, Orlu and Okigwe politically and demarcated along three agricultural zones which are Owerri, Orlu, and Okigwe. It lies within the tropical rain and evergreen forest with a tropical climate that is humid all year round.

The rainy season spans from March to October and is bimodal with a two-week break (in rainfall) in August. The main annual rainfall in the state is 20,000m while the annual temperature is between 25°C and 28°C with a relative humidity of about 98% during the rainy season and between 50% and 60% during the dry season. The major arable crops grown are cassava, yam, plantain/banana, maize, melon, sweet potato and vegetables such as telferia, okra, pepper and tomatoes. Farm holdings in Imo state ranges from 0.3hectares to 1.0hectares and other training activities include sheep/goat rearing, poultry and rabbit keeping, fish and farming and off-farm activities, especially snail processing. The study was conducted in Okigwe Agricultural zone made up Ihitte-Uboma, Isiala-Mbano, Ehime-Mbano, Okigwe, Onuimo and Obowo Local Government Areas. Primary data were collected from the field using questionnaire administration to women Okigwe Agricultural zone has 6 extension farmers. blocks. All the women farmers in the zone constituted the population of the study. From the circles, a list of all the registered women farmers was obtained from the Extension Agent covering the area.

The list has a total number of 1,300 women farmers and 10% was randomly selected which gave a total sample size of 130 respondents. Simple statistical tools such as mean, percentages and frequency distribution tables were used to analyze objectives I, II and III of the study. A 4-point Likert type scale of Very Serious (VS), Serious (S), Less Serious (LS) and Not Serious (NS) assigned scores of 4, 3, 2 and 1 was used to analyze objective IV of the study. The mean cut-off point was 2.50 and any mean response below 2.50 showed non-serious effect of insecure land right on rural women's role in household food security in the study area.

RESULTS AND DISCUSSION

Socio-Economic characteristics of respondents

Table 1 shows that 22.3% of the respondents were within the age range of 21- 40 while 53.07% and 24.62% were within the age range of 41-60 and 61-80 respectively. The mean age was 51 years. This implies that majority of the women are adults and thus, are still in their economically active age. Women of such ages can easily accept agricultural innovations, source for information and venture with commitment to the business of farming. They are also active in participating in many aspects of rural life; in paid employment, trade and

Variable	Frequency	Percentage (%)		
Age 21- 40	29	22.3		
41-60	69	53.1		
61-80	32	24.6		
Marital status Single	17	13.1		
Married	82	63.1		
Divorced	5	3.8		
Widowed	26	20.0		
Education level No formal Education	19	14.6		
Primary Education	31	23.8		
Secondary Education	59	45.4		
Tertiary Education	21	16.2		
Household size 1 – 5	24	18.5		
6 – 10	76	58.5		
> 10	30	23.1		
Farm size 0.5 - 1.0	123	94.6		
1.5 - 2.0	4	3.1		
2.5 - 3.0	2	1.5		
> 3.5	1	0.8		
Crops grown* Maize	128	98.5		
Cassava	123	94.6		
Fluted pumpkin (ugu)	122	93.8		
Okra	74	56.9		
Yam	56	43.1		
Sweet potato	34	26.2		
Cocoa	3	2,3		

Table 1: Socioeconomic characteristics of Respondents

Source - Field survey data *multiple response

marketing as well as many unpaid activities, such as fetching fuel wood, collecting feed for farm animals and taking caring for the family. The table showed also that majority (63.08%) of the women farmers are married while 13.07% indicated single, 3.85% indicated divorced and 20% indicated widowed. Marriage enhances farmers' access to labour and this very important for resource poor farmers.

It explains an increased output in productivity on land and greater chances of land security and ownership in the case of giving birth to male children. Table 1 showed a higher number of the respondents obtaining formal education. It revealed however that 45.38% obtained secondary education while 23.85% and 16.15% obtained primary and tertiary education respectively with 14.62% indicating no formal educational status. It thus explained that the women farmers are more literate i.e. they can read and write. Agbamu (2005) asserted that acquisition of formal education enhances farmers' ability to adopt innovations which also improves their decision making ability. The table also indicated that a greater number 58.46% with household size has a household size of 6 -10. Others included 18.46% with size 1 - 5 and 23.07% with size above 10. The mean household size was eight persons. This implies that large households provide labour for agricultural activitis. Nnadi et al.,(2012) asserted that large household compliments effort as every member of the household makes one useful contribution or the other to farming.

Majority, (94.62%) of the respondents had farm sizes ranging between 0.5 and 1.0 hectares. Others included farm sizes of (3.08%) with 1.5-2.0ha, (1.54%) with 2.5-3.0ha and (0.76%) with size greater than 3-5 hectares. The mean farm size was 1.7ha. This is as a result of land ownership and insecurity in the area which limits women's use of land and reduced agricultural productivity. Also reduces women's agricultural investment on land.

Entries in the table above showed that the major crops cultivated are maize (98.5%), cassava (94.6%) and fluted pumpkin (93.8%). Other crops include okra (56.9%), yam (43.1%), sweet potato (26.2%) and cocoa (2.3%). This reveals however, women's contribution the Nation's food supply, household food security and relentless efforts in agricultural productivity.

Land tenure systems in study area

Entries in the figure 1 indicated that the prevalent land tenure system in the area was inheritance (89.2%). Other tenure systems include communal (95.3%), purchased (74.6%), lease (23.1%), rent (82.3%), gift (34.6%) and allocation (53.1%). The result implies that access,

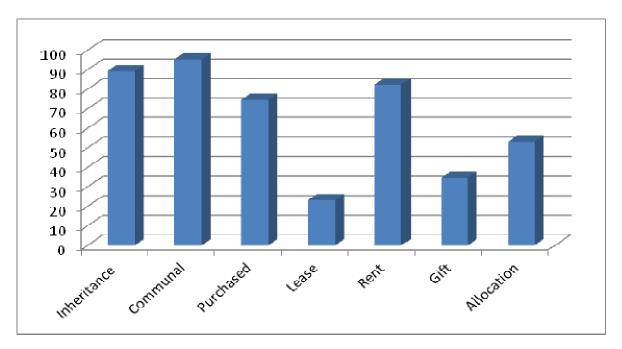


Figure 1: Land tenure systems in study area.

Table 2: Distribution of Respondents According to Land Acquisition

Land Acquisition	*Frequency	Percentage (%)
From husband	110	84.6
From family	1	0.76
From father	4	3.1
From relatives	0	0

*Multiple Responses

availability and use of land take various forms. However, they have different methods and approaches to the acquisition. Inheritance which is closely associated with communal ownership is a form of land acquisition where the people get land from their fore-fathers. The response above is an indication of how land is generally owned and accessed. It has been observed however, that this form of ownership does not promote agricultural production as it leads to fragmentation of land which prevents mechanization.

The above findings are in line with Agwu, Amasiatu, and Onuoha (2010) who posited that there are different strategies by which people gain access to land, thus: Purchase (in this case, there is transfer of title); Lease (rents are paid to owner); Share cropping (the user cultivates the land but the produce is shared between the user and owner of land in an agreed proportion); Inheritance by heirs of the owner; Squatting illegally on land; Adverse possession or prescription (by acquisition of rights through possession for a prescribed period of Compulsory acquisition (by government); time); traditional means that individuals, corporate organizations

and even government gain access to land in Nigeria through all the above mentioned strategies. Through purchase, a good percentage of interests on land in the country have changed hands.

Land acquisition methods of women in study area

Entries in table 2 revealed that majority (84.6%) of the respondents acquired land from their husbands while 0.76%, and 3.1% acquired land from family and father respectively. Land can only be passed on to women here if the man has no male child to inherit his belongings. This explains the patrilineal acquisition of land which still denies women's access to land.

Rights to land in study area.

The figure below showed that majority of the respondents (91.54%) had use right as the most prevalent in the study area. Others include transfer right (3.07%), control right

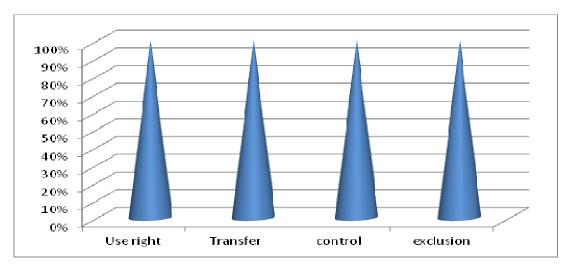


Figure 2 : Distribution of Respondents According to Right to Land

Table 3: Distribution of Respondents According to Land Usage

Land Usage	*Frequency	Percentage (%)	
Plant annual crops	120	92.3	
Plant cash crops	3	2.3	
Build farm house	0	0.0	
Make fence with blocks	0	0.0	
Apply manure always	48	36.9	
Make fence with sticks	95	731	

*Multiple Responses

(1.54%) and then exclusion and inclusion right (3.85%). This explains the insecurity faced by women in land ownership as most rural women are been denied access to land and their property right limited. Kendall-Hunt (1994) observed that while strong and secure land rights are the norm for farmers in the developed world, it is not the case for much of the developing world. This refers to women in particular. Secure rights to land refer to rights that are clearly defined, long-term, enforceable, appropriately transferable, and socially and legally legitimate (Kendall, 1994). When these land rights are not secure, it undermines the farmers' incentives to make long-term investments on land or make use of land sustainably. Bruce (2004) asserted that this land has limited economic value because it cannot be legally transferred.

Respondents land use type

The table 3 Above showed that a greater number (92.3%) of the respondents use land to plant annual crops while 2.3% plant cash crops. These are people who purchased their holding. Only 36.9% apply manure always, 73.1% make fence with sticks. This they do knowing there is no

security of access or tenure. This implies that agriculture is important to women, but female farmers have less access to the productive resources and services, such as land, livestock, human capital, extension services, financial services and new technology, required by agricultural producers

Roles of rural women in household food security

Entries in table 4 revealed the various roles performed by women in household food security. The roles performed include crop production activities such as weeding (95.4%), planting (96.9%), land clearing (92.3%), fertilizer application (94.6%), harvesting (90%), marketing (97.6%), processing (95.4%) and storage (688.5%). Also, livestock production/management activities such as feeding farm animals (76.2%), cleaning and disinfecting (70.7%), egg collection (73.1%) and vaccination (74.6%). Other roles indicated by the respondents include fetching fuel wood (77.7%), fetching water (88.5%), cooking meals (100%) and basket making (55.4%). This shows however, the great involvement of women in agricultural activities and domestic duties. Women play a vital role in advancing agricultural development and food

Table 4: F	Roles in Household Food Securit	V
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Roles	*Frequency	Percentage (%)		
Weeding	124	95.4		
Planting	126	96.9		
Land clearing	120	92.3		
Fertilizer application	123	94.6		
Harvesting	117	90.0		
Marketing	127	97.6		
Processing	124	95.4		
Storage	115	88.5		
Feeding farm animals	99	76.2		
Cleaning and disinfecting	92	70.7		
Egg collection	95	73.1		
Vaccination	97	74.6		
Fetching fuel wood	101	77.7		
Fetching water	115	88.5		
Cooking meals	130	100		
Basket making	72	55.4		

Multiple response

Table 5: Perceived Effects of Insecure Land Rights on Household Food Security

Effects	VS	S	LS	NS	\overline{x}	Remark
Low agricultural investment	62	38	21	9	3.17	VS
Slows down development on land	34	50	33	13	2.80	VS
Limits your (women's) use of land	35	71	13	11	2.96	VS
Shortage of food supply	45	65	5	15	3.07	VS
Risk of eviction	53	47	17	13	3.07	NS
Inequality in the community	44	46	36	4	3.00	NS
Poor access to market	15	40	45	30	2.31	NS
Reduced agricultural productivity	86	24	6	14	3.40	VS
Lack of water availability	24	26	61	19	2.40	NS
High unemployment rate	69	43	5	13	3.30	VS
Poor income generation	52	61	2	15	3.15	VS
Impoverished status	7	49	32	42	2.16	NS
Lack of access to credit facility	53	54	9	14	3.12	VS
Reduced daily food intake	28	69	10	23	2.78	VS

Source: Field Survey Data, 2015.

security (FAO, 2011). The Nigerian woman has proved to be more than a mere "bench-warming" spectator, even in the midst of the male-dominated professional congregation. They perform crucial roles in the domestic and economic life of the society. Rural and national development can hardly be achieved with the neglect of this important and substantial segment of the society (Kishor, Gupta, Yadav and Singh, 1999).

In recognition of the importance of women in national building, the Nigerian government, more than ever before, is keen on rural poverty alleviation as a way of improving the economy. Focus is on planned and desirable change in the rural societies in the form of agricultural development. The success of these planned change programmes is hinged largely on the rational decision-making process of the women. They participate in many aspects of rural life; in paid employment, trade and marketing as well as many unpaid activities, such as caring for the family

Effects of insecure land right on rural women roles in household food security

Entries in the table 5 Above showed the effects of insecure land right on rural women roles in household food security. Based on a discriminating mean index of 2.50, the most serious effect as perceived by the respondents was on agricultural productivity as seen with a mean value of 3.40. Other serious effects include high unemployment rate (M = 3.30), low agricultural investment (M=3.17), poor income generation (M=3.15), lack of access to credit facility (M=3.12), shortage of food supply (M=3.07), limiting women's use of land (M=2.96),

underdevelopment of land (M=2.80) and reduction of daily food intake (M=2.78). Effects which were perceived as not serious by the respondents include lack of water availability (M=2.40), poor access to market (M=2.31), impoverished status (M=2.16), inequality in the community (M=3.00) and risk of eviction (M=3.07).

These effects corroborates Doss et al., (2008) assertion that women face many constraints in the multiple activities they pursue - less land ownership and insecurity, access to credit facilities, inequality in the society, extension and other services, and ability to hire and pay for labour. Too often, these constraints as well as women's current and potential contributions to agricultural production go unrecognized. Providing secure land rights for women makes economic sense and it is important for poverty reduction. This is because of women's roles as food producers in rural and pen-urban areas, their responsibilities for feeding family members and their broader roles in household management. Female-headed households - a significant proportion of the poor - can benefit enormously from the security, status and income-earning opportunities which secure rights to even a small plot of land can provide There is a strong positive association between women's land rights and poverty reduction; this is because women's control over land assets enhances household welfare, women's cash incomes and spending on food, children's health and education. Secure land rights for female farmers and businesswomen will improve investment, access to sources of credit and better land use and productivity with women frequently regarded as at lower risk of credit default than men. This importance corroborates Duflo and Esther (2003) assertion that when women's productivity and incomes increase, the benefits amplify across families and generations as they tend to devote a larger fraction of their income to their children's health and nutrition, laying the foundation for their children's lifelong cognitive and physical development.

VS = Very serious, S = Serious, LS = Less serious, NS = Not serious, \overline{X} = Mean.

CONCLUSION

Women in the study area are greatly involved in farm activities apart from their legitimate roles as wives and mothers. There was a high perception of the effects of insecure land right on their roles in securing food for their household. Therefore, there is the need to encourage women farmers, by making available all that is necessary for successful farming including security of land, which in turn will lead to increased agricultural productivity and greater investments on land

Recommendations

Policies should be enacted by the government to secure right to land for women especially in rural areas as they are involved greatly in farming activities.

Educational programmes through extension campaigns should be provided to women to increase their knowledge-base in farming and polish their roles.

Governmental and Non-Governmental Organizations should provide support services such as credit and insurance schemes to encourage women in agriculture.

REFERENCES

- Agbamu JU (2005). Essentials of Agricultural Communication in Nigeria, Lagos: Malt House press.
- Agwu K, Amasiatu OG, Onuoha OU (2010). Land Rights Characteristics And Access To Land: Implications On Food Security In Nigeria. J. Environ. Iss. Agric. Developing Countries, 2(2&3): 146-152
- Arnold JEM (1990). Tree Components In Farming Systems, Unasylva, 41(160): 146-152
- Bruce JW (2004). Collective Action and Property Rights for Sustainable Development: Strengthening Property Rights for the poor, IFRRI/CAPRI Focus Brief.
- De Shutter O (2010). Report of the Special Rapporteur on the Right to Food. United Nations General Assembly, 2010
- Deininger K (2003). Land Policies for Growth and Poverty Reduction. World Bank and Oxford University Press, Washington, D.C.
- Duflo K, Esther MB (2003). Grandmothers and Granddaughters: Old Age Pension and Intra-Household Allocation in South Africa. World Bank Economics.
- Economic Commission for Africa (2003). Land Tenure Systems and Sustainable Development in Southern Africa. Southern Africa Office, Lusaka, Zambia.
- Environmental Defense (2002). World Bank Market Based Land Reform Fact Sheet.
- FAO (2009). The State of Food and Agriculture: Livestock in the Balance, Rome.
- FAO (2006) Agrarian Reform: Land policies and the Millennium Development Goals:
- FAO's interventions and lessons learned during the past decade. FAO, Rome
- FAO (2006) Land tenure food security and investment in post war Sierra Leone, FAO, Rome
- Food and Agriculture Organization of the United Nations (2011). The State of Food and Agriculture: Women in Agriculture. Rome: FAO.
- Kishor R, B Gupta SR, Yadav, TR Singh (1999). Role Of Rural Women In Decision-Making Process In Agriculture In District Sitapur (Uttar Pradesh). Indian Journal of Agricultural Economics 54: 282-286.
- Kendall-Hunt (1994). Searching for land tenure security in Africa 15, 19.
- Nnadi FN, Umunnakwe PC, Nnadi C, Chikaire J (2012). Cooperative Evaluation of Public and Private Extension Services in Ohaji / Egbema Local Government Area of Imo State.
- Rukuni M (1999). Land Tenure, Governance and Prospects for Sustainable Development in Africa. Policy Brief No. 6. Natural Resource Policy Consultative Group for Africa. Washington DC. World Resources Institute.
- SADC (2010). Synthesis Report of Key Agricultural Policy Issues. Final Report: Volume II. Southern African Development Council.
- Saito K, Hailu M, Daphne S (1994). Raising the Productivity of Women Farmers in Sub-Saharan Africa (Discussion Paper 230).
- Udry, Christopher (1996). Gender, Agricultural Production, and the Theory of the Household. Journal of Political Economy, 104, pp. 1010–1046. Washington, D.C.
- Willkinson, John, Rocha, Rudi (2009). Agro-industry Trends, Patterns and Development Impact, in: FAO/UNIDO, Agro-industries for development, Rome.