

Agricultural Transformation in Sub-Saharan Africa: The Search for Viable Options

BENSON NINDI

The National University of Lesotho

INTRODUCTION

Some scholars argue that small peasants including women producers cannot feed Sub-Saharan Africa (SSA). They therefore advance the argument for more commercialisation and commoditization of SSA agriculture via a *bimodal* or *multi-modal* strategy, which means the development of large-scale private agriculture to complement and assist the small holder sector and feed the expanding urban populations (Cohen 1987; Gladwin and Truman 1989; Hart 1989; Hyden 1980). They argue that commercialization is necessary and important to facilitate and make the forces of production "moving" again. According to Hyden the self-sufficiency of African peasants has made them "uncaptured" and autonomous to such a degree that development and transformation have been blocked.

Opposed to this argument are the supporters of a broad based small-holder *unimodal* strategy of development, supporters of long-term investments on the part of donor institutions and states in location specific, appropriate technology transference, and advocates of farming system projects as a way to bring about the above strategies does to concrete local conditions of the African peasantry (Mellow and Johnson 1984:531-74; Johnson 1986; Eicher 1982:151-74; Collinson 1982; Norman, Sommin and Hays 1982).

This debate has motivated the present analysis which asks whether a turnaround in African agriculture can be achieved without supporting and helping African women farmers - mostly smallholders - to farm (Due 1986:19-20). Note that this question is completely different from the equity question, which asks whether an increased commercialization of SSA agriculture would hurt or help women producers. This latter issue is itself an area of rapidly expanding body of literature (Boserup and Tinker 1976; Standt 1978:439-58). In other words, the main question here is that, if the changes needed by a turnaround bypass women producers, can a real turnaround occur? (Lele 1981:547-53; Bates 1980; Timmer, Falcon and Pearson 1983; Timmer 1986).

In fact, this question is more difficult to answer than expected, in part because the answer depends on whether we are discussing about a turnaround in the short run (e.g. one decade) or in the long run (e.g five decades or so). Section one of

this work presents data supporting the argument that a turnaround in the short run is not possible without helping African women producers to farm, simply because there are too many women farming to ignore them.

Section two, however, presents materials supporting the counter-arguments; that yes, a turnaround is possible in the long run without helping women farmers. According to Boserup and others, what is required for a turnaround to occur is intensification of agricultural production. This process causes women's participation in agricultural activities to decrease relative to men's technological change which often displaces women producers from their means of material production. Development planning more categorically fails to include women. As a consequence, African women producers are now being marginalised in agricultural production process. These issues and arguments are discussed and supported here by recent findings from SSA, i.e. Burkina Faso, Malawi, Tanzania etc.

A new argument in section three, by contrast, qualifies the argument of section two and asserts that the rate of displacement of women farmers will be extremely uneven both within and between African countries. Based on recent FAO reports and other sources which demonstrate that population pressure and land scarcity are quite unevenly distributed in SSA, in section three I argue that the intensification process that displaces women producers will be more urgent in some SSA countries than in others (FAO 1984; Higgins, Kassam, Maiken, Fischer and Shah 1982).

The displacement of female peasant producers will thus be blocked or slowed down in areas with lower population densities due to the high incidence of human or animal diseases, which have historically discouraged settlement. Other reasons that will negatively affect the rate and degree of female displacement include male out-migration and the presence of gender neutral incentives to produce.

In section four I conclude that in the short run, a turnaround cannot be achieved without helping women peasant producers with hand-hoe agriculture. In the long run, however, these producers will be displaced in some areas or regions but will continue to be the norm in others. The validity of the research data reviewed, especially the macro data, must be taken with some caution. The small scale studies which may be far more valid are far less generalizable. However, even their validity can be seriously affected by the gender bias of the researchers who are overwhelmingly male-oriented.

1.0 NO, A TURNAROUND IS NOT POSSIBLE WITHOUT HELPING WOMEN FARM

According to Boserup's study, women in all the cases recorded were found to perform more than half of the agricultural work; in some cases they were found to do about 70 percent and in one case nearly 80 percent of the total. Even today village production in SSA continues to depend predominantly in female farming.

At first blush, the answer to the question asked above in this paper is categorically No. Data first collected by Baumann in the 1930s and summarized by Boserup and others show that there are just too many African women farming for a turnaround in agricultural production to take place without their active participation in the activities. Boserup notes that "even at the most primitive stages of farming autarky there is some division of labour within the family, the main criteria for the division being that of age and sex" (Boserup and Tinker 1976:22).

Social scientists' explanation of sex roles within the family are often ethnocentric. However, Margaret Mead assumed universally that, "men bring the food and women prepare it". The assertion that the provision of food is man's prerogatives is unacceptable and inaccurate according to Boserup et al who argue that there are two types or patterns of subsistence agriculture. Cross-culturally, there is "male farming" in which food is produced by men with little help from women, and "female farming" in which food production is taken care of by women with little help from men. The latter is prevalent in SSA with shifting cultivation/or slash-and-burn agriculture.

Using data from subsistence societies in 10 African countries, Boserup shows two things: first that virtually all rural women in SSA take part in farm work, and second, that more agriculture work load in the family is carried out by women than men. For example according to Caballero, there are no reliable statistics concerning women's participation in agriculture, but it has been estimated that in some parts of Guinea-Bissau, the women produce up to two-thirds of the food consumed by their families. In rural areas the position of women is still characterized largely by submission to and dependence upon men. In general terms, women do most of the farming work without any form of remuneration as a consequence of unequal distribution of power in the household. Polygamy is still widespread, the wealth and status of men increasing with the number of women they own (Caballero 1987:21).

Dixon gives supportive data by deriving new estimates of the sex composition of the farm labour force for 82 countries of SSA, North Africa, and the Middle East, Asia and the Caribbean (Dixon 1982:558-59). Dixon re-examined the 1977 ILO standardized estimates of the percentage of women in the farm labour force for over 100 underdeveloped societies by regressing those estimates on comparable materials from the 1970 FAO agricultural census, which tends to be more inclusive. From this analysis Dixon argues that the labour force concept used in the 1970 FAO agricultural census is more inclusive than that used in population census.

As Dixon problematized the evidence, the reconsidered material shows a higher female percentage of the agricultural labour force. For all 82 countries, the proportion of women in the farm labour force increased from 30% to 42%. Although interregional differences exist, on average women are a high 46 percent of the agricultural labour force in SSA. Given these figures it is questionable whether a turnaround or recovery and transformation in African agricultural

production process would be possible without including women as explicit targets of agricultural development activities (Cloud 1985:163-72; Due 1985:16-19).

However, there are problems with accepting this simple, straight-forward answer - that there are just too many women farming to ignore them - as many studies have shown. Summarized below, this analysis demonstrated that, women's participation in farming declines in the following respects: first, with intensification, second, with most kinds of technological changes, and third, with Western funded development projects, which limit women's access to inputs and other resources. The findings of Von Braun also point out that the productivity of women's labour is very low because women do not have access to productivity increasing technologies, being excluded from credit markets, often due to lack of formal land ownership, farm extension assistance and education (Von Braun 1989).

2.0 DATA SUPPORTING THE COUNTER-ARGUMENT

2.1 THE INTENSIFICATION ASSERTION

However common female farming was and is in SSA with shifting cultivation, it decreases with agricultural intensification (Boserup et al 1976:16-36). Female farming systems can exert control in areas with low population densities and an ample land/person ratio, such that families can cultivate their food with very small inputs of labour and no fertilization by leaving exhausted, low yielding lands fallow. Boserup argues that "It is precisely because such labour-extensive farming systems can be used in most of Africa that it is possible for African villagers to leave most of the farming to women..." Boserup et al 1976:32.

Population pressure, as a consequence plus other factors, causes shortening of the fallow cycle and the introduction of new production techniques. For example, the introduction of the plough leads to an increase in male farming activities, in which food is produced by men with relatively little help from women. From this argument one can see that it is almost "universal" for men to do the actual ploughing, in part because the plough increases stratification and the number of hired labourers who tend to be male and in part because it reduces the work load of weeding which women perform, whereas it introduces the activities of collecting fodder for domesticated animals, which either children or men or women may do. Both collaboration and modification of the Boserup hypotheses comes from cross-cultural research of anthropologists and other social scientists interested in explaining the oppression and the relatively low status of women producers.

In examining the sex division of labour processes in his study, Murdock argues that there is a masculine advantage for strenuous activities, and a feminine advantage for activities that are compatible with child care (Murdock and Provost 1973:329-69). The latter tasks are normally not dangerous, and do not need distant

travel, and are interruptible. Burton, Brudner and White and others argue that child-care constraints as a consequence reduces women's geographical mobility and inclination for women not to undertake dangerous tasks (Burton, Brudner and White 1977:227-51). They argue that this causes men to initiate production sequences involving livestock production, fishing and agriculture, and women to follow the sequences. Using entailment analysis, Burton and others argue that if women in SSA engage in activities at the beginning of the productive succession, for example preparing the soil, then they will also engage in other activities at the end of the production circle or sequence, like planting the crops, tending them and harvesting them.

Ember and others on the other hand, object to the argument that women are "pushed out" of agriculture because men take over the ploughing activities (Ember 1983:185-304). Instead, Ember provides data to show that women are "pulled into" additional domestic work with the intensification of agriculture because more time is required on weeding, and food processing with the new cereal crops than with the old root crops. This additional work explains exploitation mechanisms and why women's contribution to agriculture decreases in relative but not in absolute terms, a conclusion also arrived by Boserup.

Burton and Murdock's definition of intensive agriculture moves from "agriculture using the plough or irrigation or both" to a more economic definition (Burton and White 1984:568-83). Holding land constant, intensification results from labour intensification, capital intensification, and or technological transformation. Population pressure produces labour intensification which, then reduces women's participation if it needs very high labour inputs per day on a seasonal basis, as it occurs with cereal crops (versus root or tree crops with less seasonal time pressure) and in environments with a short growing season and a long dry season. Capital intensification increases male participation in certain activities and tasks "to the extent that men monopolize ownership of drought animals and agricultural implements... and seek to perpetuate that control by keeping the use of those productive factors out of the hands of women" (Burton and White 1984:571).

Social relationships of production may include changes from burn-and-slash systems to intensive farming processes with the plough or alternatively, changes in the importance of domestic animals in the farming system. Women's participation in agricultural production decreases with the importance of domesticated animals in the household economy because domestic animals spend more of their time close to the household, where they are more likely to be attended by women or children who supply fodder by weeding. The argument here is that this decrease may be relative rather than absolute, as recent evidence shows that as hired tractors or ox implements are used, acreage is increased and women, who perform most of the weeding and harvesting activities, experience increased labour demands.

2.2 MOST TECHNOLOGICAL CHANGES DISPLACE WOMEN FARMERS

It seems generally agreed that African women producers play a very important role in the food production process. However, it can be argued that designers of new technology fail to recognise and understand women as semi-autonomous producers and consumers within the context of a larger extended family household (Eicher 1982:173; Berg 1981:75). This is undisputed in spite of many recent findings, which show that African households cannot be treated as homogenous, unified decision-making units whose internal social relationships and dynamics can be taken as given. Indeed, behavioral assertion and assumption that the household is a husband-wife team, practising a jointly held utility function to achieve shared objectives, hide both the conflicts and complex complementarities that take place within and divide that household (Guyer 1981:87-137; McMillan 1987:295-314; Okali and Sumberg 1986:166-181).

Robertson and Dey have shown how husbands and wives lend each other money and other resources at rates only slightly less than the prevailing market rates. For example, husbands sell firewood to wives, wives sell water to husbands in the fields and wives and husbands sell each other animals and other commodities which are consumed by the family on feasts and special social occasions (Robertson 1976; Dey 1981).

The above discussion takes no notice of the questions and issues of how decisions are put into practice within households, and whether men and women have different and conflicting production priorities. In many agrarian communities, each wife and son are responsible for cultivation of a private field. In most cases, the units are overlapping as a consequence because the wives and married sons are required also to provide labour to cooperative fields managed by the household head (McMillan 1987). In other communities without private fields, the husband and wife together produce food and cash crops, some of which are women's commodities and some of which are men's crops (Spring 1989).

For example, McMillan's analysis of the Mossi family who migrate from their home village in the Central Plateau region of Burkina Faso to the Volta Valley Authority's (VVA) resettlement scheme shows how much of the area was cultivated as private fields in 1979. Not less than 64% of those private fields were supervised by women. Private fields accounted for an estimated 27% of the area planted. McMillan estimated that 15% of the total area planted and 13% of the total production of the above mentioned commodities were on women's private plots. In addition, an average of 12% of the area planted in corn, 66% in peanuts and groundpeas, 16% in rice, and 58% in vegetables was on women's private fields. In all, McMillan argues that women's production traditionally accounts for 20-25% of the total food produced by the Mossi family.

Although the above mentioned calculations do not appear significant or important, the role of that 25% is crucial to the survival of the extended polygamous family. Traditionally, a significant amount of the food produced on a woman's farm is used to provide supplementary food for herself and her children

during the dry period when food supplies and availability from the cooperative fields are exhausted. Without such private food stores, a woman cannot adequately feed her children, especially during rain-deficit periods as noted by Chambers (1982:217-234). Moreover, the income from a woman's cash crop production is utilized to meet other important requirements such as school fees, second hand clothing, medical supplies, as well as to pay for additional spices for food. Women work an average of 47.5% of the recorded hours worked on cooperative fields; 43.5% of the hours worked on men's private fields, and 79% of the hours worked on women's private fields (McMillan 1987).

The way in which household labour is distributed to the collective farms instead of the private fields, and the choice of food versus cash crops grown on each type of field has usually been determined by traditional rules and rights, as is the distribution of cash income from cash cropping. As a form of social division of labour, men clear the forest, climb the trees, burn the bush while the operator of the fields does the seeding and weeding. Normally, the household head has rights to the labour of all household members, who must work on cooperative fields at specific moments. However, women and younger men in the household, according to this process, do not have these rights over other household members' labour (McMillan 1987). As labour is usually the most scarce resource for the SSA agricultural activities and thus the factor that most prevents expansion of agricultural production, traditional rules and customs about labour allocation and utilization determine the total production process and incomes produced by different household members.

With an intervention from outside, such as new agricultural commodities, or the sedentarization of a previously nomadic population, traditional rules or rights were suddenly questioned and made subject to negotiation. Contradictions and conflicts often emerged between household members in determining how to take advantage of the new enlarged set of economic resources. As a consequence, conflicts raised over which agricultural commodities were grown, how much of the harvest was surplus, and how such resources should be distributed. A number of observers tend to argue that the dynamics of the development process itself had negative consequences on women's autonomy and status, while formalized political power was given to men.

Unfortunately, a number of development activities continue to ignore the implications of the semi-autonomous position of African women producers who have stake in protecting their own interests, such as farm income and an obligation to their children to do so, etc. In 1987, Gladwin observed that extension agents and development officers in Salima district, Malawi, started a groundnut seed multiplication project with male household heads instead of their wives, even though groundnuts are clearly a women's crop in central Malawi. On the other hand, Gladwin observed that tobacco, cotton and hybrid maize are men's cash crops. Both men and women claim to work together in all their fields. The result of the seed multiplication project was that the wives of the programme participants lost their cash crop and income for the year. Similarly, McMillan's

study of the VVA land resettlement project shows that there was no consideration of women's semi-autonomous production in the initial stage of the project (McMillan 1987).

The end result of little or no change in women's relative labour patterns, combined with a concentration of production of cooperatives rather than private fields, was a loss of autonomy and resources by the women. Whereas in the home village women had rights to the produce of their private farms, in the VVA project women have no right to the fruits of their labour on cooperatives, i.e. gift-giving. However, this loss of autonomy was not without compensation. Yields in the VVA project were two times the recorded production in the home area and an average of 0.9 metric tons per unit labour, and the net agricultural income in the VVA project was roughly three times the average for home area.

However, due to the project's neglect of private plots and other indicators, i.e. the increased length of the agricultural work season (from 7 to 10 months due to the large scale cultivation of cotton), the increase in the absolute number of hours worked, the much greater distances to regional markets, and their removal from their extended families, many female producers were marginalised in the programmes. This sense of marginality was reflected in the higher rate of women drop-outs and a declining interest in nutrition and housekeeping. The case of the VVA resettlement scheme and its early negative impact on Mossi women producers is not a unique one. Other, not so capital-intensive interventions, have similar results of decreasing women's benefits in farming.

Another general conclusion which can be drawn here is that the experts talk glibly about "scale-neutral" techniques, which increase employment in agriculture, but nowhere are distributions and credit "scale-neutral". Under market conditions, the larger and richer farmers receive preferential treatment, because this makes "economic sense". In most Tropical African countries they receive even more preferential treatment, because they have the money and the influence to buy it, and because "experts" find this more economically efficient (Raikes 1988:132). Even the Mossi cursory survey of where "modern agriculture" is advancing in tropical Africa shows quite clearly that it is in the best-watered areas, nearest to the main towns. The dry and marginal areas are where many of the problems lie, but they tend to be ignored because the technical solutions are not yet known (by experts) and because governments and aid agencies prefer to avoid the risk of failure or because the profit margin is lower.

2.3 DEVELOPMENT PLANNING FAILS TO INCLUDE WOMEN

A number of observations in development policy tend to show that development limits women's accessibility to basic agricultural inputs and other resources and closes opportunities for them when access to capital, inputs, the market, and the political arena is blocked (Ensiminge 1987:28-49). Also a number of attitudinal studies in SSA tend to show that women producers want development

interventions. In Tanzania, Zambia and Malawi for example, women farmers claimed they needed and wanted help in the form of farming improvements (most importantly, labour saving devices), credit, clinics, wells, improved transport and roads and improved extension and farmer training centres (Due 1983:12).

Notwithstanding the expressed wishes of African women producers for access to land being achieved via land reform (Ashby 1981; Due et al 1983:261-77; Due and Summary 1982:155-66; Fortmann 1981:205-14; Moock 1976:831-835; Spring 1986:154-62; Standt 1978:439-458). Data from Standt's observation in Western Kenya on 212 households tend to show that women farm managers have experienced a persistent and pervasive bias in the delivery of agricultural services from their governments, and it makes no difference whether the women have high status, large farms or have shown a willingness to adopt innovation (Due and White 1986:94-98).

Specific results show:

1. Agricultural instructors tend to visit farms jointly managed by men and women more often than farms managed solely by women.
2. More members of a jointly managed farm receive training at a local agricultural centre than do members of a female-managed farm.
3. More members of jointly managed farms know about credit facilities and apply for agricultural loans than do female farmers.

Male technicians and extension agents usually communicate with men and thus tend to provide information, technology and credit to men (Nindi 1986:112-133). This usually means that married women farmers receive advice and credit indirectly if at all, and unmarried women household heads suffer especially. Gladwin observed that, although 69% of Malawi's full time farmers are women, and 50% of agricultural labour is carried out by women, and women headed households make up 28% of all households, women accounted for only 25% of credit club members in 1986-87 (Kydd and Christiansen 1982:355-375; Dixon 1981). The discrepancy between women's involvement in agriculture and in credit clubs is unfortunate because it means that the credit for fertilizer, improved seeds, an pesticides reaches only a small minority of the agricultural producers in the country.

The disparity between who farms and who receives credit is due to institutional barriers and social constraints. According to Gladwin few women are full members of farmers' clubs or organizations in the sense that they receive credit directly and attend extension meetings because, by law, married women are "automatic" members, receiving credit indirectly through their husbands. The few women who are full members are thus unmarried or divorced or women in a polygamous setting whose husbands are giving fertilizers to the other wives. They have no other choice because they do not have a man to be their intermediary. It is

thus a social stigma rather than a privilege for these women to attend the farmers' club meetings, and they sit apart from the men silent and embarrassed.

The women producers are all too aware of the loss of social status that "full" membership means and would like to belong to a women's club of both married and unmarried women. Unfortunately, the number of women's "clubs" or organizations or institutions at the village level is low. Also the shortage of female extension agents serving the Women's Programme limits the number of women's clubs. IFAD noted that in 1985 there were 1,800 women farmers per female extension agent, as contrasted with only 461 male farmers per male extension agent (IFAD 1986).

An additional constraint to female household heads' access to credit is the fragmentation of their holdings or their small farm size: almost half (42%) of women heads have farms of less than 0.5 ha. Moreover, one of the local requirements or criteria by which local farmers' club admits or rejects members is the so-called "reasonably sized garden", which varies from 0.5 to 2 ha. As a consequence almost half of women household heads are eliminated from full membership in a farmers' club due to their small size of land holding.

What is the impact of this gender bias in access to credit? According to Rapid Fertilizer Survey carried out by the Ministry of Agriculture in Malawi, the total amount of fertilizers - the main yield-increasing input to cash and food crops - used by female household heads is half of that used by male heads. These findings show that the amount of fertilizers per hectare used by women tends to be significantly lower than that used by men.

Although women household heads apply uniformly less fertilizer per hectare than men heads, gender does not matter when one holds constant the access to credit and cash. But without access to these resources, i.e. credit, women household heads apply less fertilizer than do men (Mkandawire 1983/84:109-128).

Results in the Rapid Fertilizer Survey show that access to cash and credits have very significant and positive effects on the quantity of fertilizers applied by an individual smallholder. In addition, the positive sign on manure application demonstrates that it is a complement to chemical fertilizers because the soil needs both chemical and organic fertilizers. However, the environmental impact of these inputs has not been carefully studied. The amount of land cultivated is negatively correlated with the quantity of fertilizer per hectare.

In her analysis Spring shows how aggregated statistical data on agriculture fail to show the significant contribution of women. Agricultural development programmes in Malawi have been designed on the assumption that the household was an undifferentiated unit, and that within it women's contribution to agriculture was minimal and under the control of the male household head. In addition to demonstrating that the assumption is empirically flawed (many households in Malawi, as well as in East Africa, are headed by females), she points out the major contribution that women make in agriculture. If anything, agricultural programmes should be particularly attuned to the importance of women as

labourers and as farm managers, since men, who are increasingly involved in wage employment, are becoming part time farmers while women are emerging as full time farmers.

Are donor agencies helping this situation to change? Evidence collected by Standt from USAID summaries of agricultural extension and credit projects show that in all underdeveloped countries 1% or less of projects specifically mention women as targets (Standt 1978). Based on these data, we conclude that on the way to a turn around, African women producers will be differentiated out to production. Via what A. de Janvry has dubbed the "farmer road" to development, African women farmers will lose over the means of production (land, equipment, income) although their labour input in agriculture may not decrease and may even increase in absolute terms (Janvry 1981). For policy planners concerned only with the supply of food to feed the politically sensitive areas the question of who produces the agricultural surplus and the loss of land, income and autonomy by women farmers is not adequately considered (Nindi 1989).

3.0 WHY HAS NOTHING BEEN DONE?

The economic crisis that has afflicted SSA in the 1980s has made more and more Africans aware that development must come from within and build on local initiatives from below. Rapid agricultural transformation will not occur over night. So appropriate and long term planning of concentrated, concerned effort will be necessary, human capital investment in the form of building indigenous research capacity to grapple with these complex issues must parallel other policy changes. A lack of awareness of the multiple roles of African women as food producers and reproducers of human capital has contributed to Africa's impending crisis. Project funding activities that go only to the male household head whose main product is a cash crop will not improve yields of food crops or help alleviate a food crisis. Given that women farmers must be incorporated into development projects aimed at solving agricultural and food problems, the question that remains to be answered is: how?

If social scientist and their work are rarely used in agricultural and other types of development projects, Cernea asserts, it is because they do not translate "their knowledge into operationally relevant propositions for technical experts" (Cernea 1986:xi). Another reason for the lack of substantial anthropological input is observed by Hecht (1986). Anthropologists are often asked merely to "salvage" the work of the development community and so they enter the project late or for a short period. Although their short-term assignments on projects and their ability to use secondary sources to supplement field work may give them more freedom than other technical advisers, some development planners consider anthropologists' data sets too small to be used as a basis for planning (Koenig 1986). The ironic danger of an anthropologist knowing the area too well is mentioned as a drawback by Dyson-Hudson, who sees potential problems as the

anthropologists translated for others what is happening on a project. He also decries the overuse of such general terms as "tradition" "society" and "culture", with insufficient attention to the idiosyncratic, the predictive, the full range of behaviour, and alternative forms of procedures and organization (Dyson-Hudson 1985:186).

On the other hand, there are cogent arguments for anthropologists: participation in development projects. Cernea sees the knowledge of social science as assisting in understanding households and local organizations, particularly "the centrality of the family-based production unit to any rural development process" (Cernea 1986:ix). Hecht argues that anthropologists can make such contributions as: encouraging broader farmer participation in design; identifying farmers' training needs; building effective communication channels between farmers; and research officials; stretching farmers' local institutions, and incorporating socio-economic research into the larger framework of proposed farming systems research (Hecht 1986:15).

The perspective taken here is that social scientists can enhance the participation of the intended beneficiaries and can discover mechanisms to incorporate both their participation and other socioeconomic concerns into the new institutions. We have examined the role of social science in understanding agricultural transformation in Sub-Saharan region. Causes of conflict were identified and we have shown the reasons why social scientists enter project implementation too late. We have also tried to show the significance of social science knowledge in planning and implementing agricultural development programmes and in preventing conflicts of various levels.

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