# INEQUITIES IN THE DELIVERY OF SERVICES TO A FEMALE FARM CLIENTELE: SOME IMPLICATIONS FOR POLICY

By

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## ABSTRACT

This paper is based on data collected in 1975 from a geographically stratified sample of 212 small-scale farm households in one administrative location of Kakamega District, western Kenya. It is found that women farm managers experience a persistent and pervasive bias in the delivery of the government agricultural services to which they are entitled. The bias increases in intensity as the value of the service increases. Moreover, the bias holds under a number of different controls including economic standing, size of land holding and demonstrated interest in adopting agricultural innovations in a timely way. Despite these inequities in access to services, women farm manager in the area appear to be as productive and as willing to adopt innovations as other types of farmers.

A number of suggestions are made to deal with the problem of inequity in the delivery of agricultural services.

A bureaucracy is effective to the extent that it accomplishes tasks and meets goals. In Kenya the agricultural extension bureaucracy ostensibly aims to increase the productivity of both food and cash crops by individual and group training methods. In all parts of Kenya, and in many parts of Africa, women constitute one-third or more of the farm managers, and thus of the administrative clientele. Furthermore, women as the traditional cultivators in many ethnic groups have been closely associated with the production of food. If government aims to increase the productivity of agriculture, the extension of services to food producers is essential. In other words, the effectiveness of administrative performance hinges on reaching women farm managers and food producers, who form a substantial proportion of the population designated as targets for agricultural extension.

Yet there is good reason to believe that women have substantially less access to government services than do men. In addition to several scholars who have commented on this fact, a number of international bodies have noted that women lack access to agricultural training and advice, and speculate as to how this affects the implementation of agricultural development policies. (De Wilde, 1; Lele, 5; UN/ECA, 8; ILO, 3) Furthermore, general agricultural policies in many countries, including contemporary Kenya, do not give explicit recognition to the role women play in food and crop production.

Farming and agriculture were chosen for research because of their policy relevance in Kenya today. It is estimated that seven of the ten million inhabitants of Kenya are dependent directly on agriculture for their livelihood. Agriculture accounts for 40 per cent of the G.D.P., and forms more than 60 per cent of Kenya's total exports. (4) The government regularly affirms its interest in agricultural development as a key to the improvement of the life of the majority of Kenyans, who either live in the rural areas or depend on the supply of food from the rural areas for livelihood elsewhere.

The purpose of this paper is to provide empirical support for the hypothesis that the government gives preferential access to men in agricultural services. We then proceed to explore why such discrimination occurs by inserting a number of controls into the analysis. Women are perhaps perceived as "traditional", conservative or poverty-stricken, and unwilling or unable to adopt crop and husbandry innovations that are promoted by the agricultural extension administration. From a bureaucratic and economic perspective, discrimination might be seen as the most efficient use of scarce resources if preference is extended to those farmers with the cash, land and propensity to innovate. Such farmers might have a greater likelihood of adopting crop and husbandry innovations promoted by the agricultural administration. As will be evident from the analysis however, the legitimacy of this bureaucratic perspective

is highly suspect; wealthy and innovative women farm managers with relatively large land holdings experience bias in the receipt of agricultural services relative to their male counterparts. The failure of bureaucrats to extend services to women managers, particularly those women with the material resources and ability to respond to innovations, is a telling critique of bureaucratic performance and ability to substantially alter agricultural productivity. A large part of the bureaucracy's clientele, who are women, are in effect ignored. The paper concludes with a set of policy recommendations designed to better integrate women into the agricultural extension network.

RESEARCH SITE

The data consist of a geographically stratified sample[1] of 212 small-scale farm households in one administrative location of Kakamega District, western Kenya, collected in 1975. For purposes of the study, farms were divided into two types: female managed and joint managed which are farms with a man present. Joint management includes both husband-wife households, and households where inter-generational management occurs because land has not yet been parcelled out to sons. Kakamega is a densely populated area where rates of male out-migration in search of wage employment are among the highest in Kenya. A full 40 per cent of the sample consists of women managing farms on their own, and this closely corresponds to figures in the 1969 Kenya Census which show

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1. A geographically purposive sample of 212 farm households was obtained in the Idakho research site between December 1974 and June 1975. It represents 10 per cent of the total number of households in the geographic areas targeted. The initial concern was to assure that varying distances from the road and main paths, and thus from agricultural instructors and services, would be covered. These geographic areas coincide with clan and subclan identities. Once spatial areas were designated in order to obtain geographic and clan representativeness, the author attempted to select farms that would be representative of varying economic standings and age groupings. Numbers of different categories of farms were based on approximations of their proportion of the population. The farm management type, however, was not known until the interview had begun. The close correspondence of women managers in the sample to the proportion of female heads of households in Kakamega reported in the 1969 Census supports the notion that the choice of farmers was "chance-like" in method. The sample is not, however, a random one, and the universe of this sample is restricted to one location. The sample does not proport to generalise to all of Kenya or Africa, but rather to illustrate sex differences within a sample which may be suggestive for other parts of Kenya or Africa with agriculturally based economies in areas of high population density and high rates of male out-migration. Though scientific sampling techniques were not utilised, the sample judiciously represents a reasonable cross-section of farmers in western Kenya based on knowledge obtained during six months residence in one of the sublocations with a family who welcomed the author as an additional member. Through residence in the family and participation in community life, the author gained in-depth knowledge of the subclan and geographic area. A female research assistant from the area conducted the interviews with the author and she translated questions and responses from Lwidakho to English. Each farmer was asked a systematic set of questions about crops grown, husbandary practises, sources of information about farm practises, agricultural services and demographic factors. A typical interview took 40 minutes.

36 per cent female heads of household in Kakamega. A common pattern in Kakamega, as elsewhere in Kenya, is for men to engage in wage employment away from the farm and return home upon retirement.

Research was done among a subgroup of the Luhya people whose social organisation is both patrilineal and patrilocal. Women traditionally have done much of the agricultural labour; they are responsible for digging in connection with land preparation, planting, weeding and harvesting. Men traditionally clear the land, plough with oxen and care for cattle; men also help with work operations in the women's sphere, but are not totally responsible for them. (Wagner, 9,p.41 and Sangree, 7, p. xxxvi) Men who work outside the district sometimes "work with money", by sending cash for the purposes of hiring labourers to plough or buying agricultural inputs such as seeds, fertiliser and tools. Farms are small in scale; the average size for the entire sample is 2.5 acres.

Women frequently make many of the decisions connected with husbandry practises, crops grown, time of planting and storage. Indeed, most of these agricultural activities were found to be within the realm of women, even on those farms with a man present. Not infrequently, one finds a man who is unfamiliar with such details of the farm operation. A subsample of 107 farmers were questioned about initial decision-making connected with adopting hybrid maize, a more radical departure for farmers than the day-to-day decisions about crop husbandry. The following results were obtained: in 34 per cent of the cases, women made the decision; in 31 per cent, men; in 28 per cent, both spouses made the decision; and in 7 per cent of the cases, a son made the decision. That women comprise the largest category is not surprising, given the extensive female management phenomenon. A traditional orientation towards female management of such crops, plus marital separation, leaves no choice for such women.

Probably the most carefully documented research on East African women's decision-making was that done by Hanger for two communities in Uganda and Kenya. The average proportion of women making agriculturally relevant decisions, including when to plant, what to grow and whether to buy seeds, was more than two-thirds. (Hanger, 2)

Women engage in extensive associational activity, including church groups, mutual aid societies and communal agricultural groups for planting, weeding and harvesting crops. More than 90 per cent of the women in the sample belonged to an organisation of some type. In these networks of women, a good deal of agricultural information and labour is exchanged. Men, in contrast, attend barazas, which are weekly meetings in which government announcements and

judicial decision-making occur. Occasionally, agricultural information, advice or demonstrations are given by extension staff at the barazas. While women are not prohibited from attending barazas, they rarely do so because of custom and time constraints.[2] These separate communication patterns for men and women have important consequences for communication between agricultural field staff, who are almost all men (98 per cent in Kakamega), and the female section of their clientele.

## AGRICULTURAL SERVICES

Agricultural services in Kenya are of several types. The most common form is visits by agricultural instructors to farmers, all of whom are entitled to such visits. Instructors advise farmers about husbandry practises and new crops that are being promoted by the agricultural extension service, and they provide information about other services. Visits are most often initiated by the instructor rather than the farmer. Visits make up the largest proportion of the agricultural instructors' duties, though only about twenty farms are visited per month according to a study done in western Kenya. (Leonard, 6, p. 144)

Th instructors with extensive contact with farmers work on the location and sublocation level, the latter being the smallest administrative unit in Kenya. There is generally one instructor for every 1,000 to 2,000 farm households in Kakamega District. Instructors usually have a primary school education and one to two years of specialised agricultural training, depending on their age and year of entry into the agricultural service. Instructors generally live in or near the area they serve, and thus know the people in their assigned area fairly well.

Instructors also provide group training in the form of demonstration plots where lectures are given to groups of 10 to 50 farmers on farming practises such as fertiliser application or planting in lines. In the research area this technique was infrequently utilised, with at best one demonstration per growing season.

Farmers also are trained at Farmer Training Centres, located in every district in Kenya. Training Centres provide a one- to two-week course on specialised agricultural topics such as coffee growing, cattle husbandry or vegetable gardening. In this area, farmers perceive training in the centres as available only by invitation from agricultural instructors or local administrators, though among younger farmers there is an increasing awareness that

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2. The author attended a number of barazas and never saw more than 10 per cent women in attendance.

it is a service to which all are entitled.

In national and district level agricultural annual reports, approximately one-third of the trainees are reported to be women. A closer examination of courses reveals that women are generally found in home economics courses in which the primary thrust is domestic rather than agricultural advice. Home economics lessons include a wide variety of topics such as cookery, child care, sewing, health and sanitation, nutrition, home management, home improvement and vegetable gardening. Although home economics has a number of valuable components, the agricultural aspects of the course are significantly diluted and comprise at best 30 per cent of the curriculum. These courses are further restricted to certain categories of women, most often "chief and assistant chief wives" and "agricultural staff wives".[3]

Loans are also available to farmers in the form of a Guaranteed Minimum Return (GMR) advance for maize seed and fertiliser, and in cash from the Agricultural Finance Corporation (AFC), a parastatal body. A land reform programme initiated by the colonial government and implemented since independence has created a system of individualised land ownership. Farmers can use land title deeds or wages as sureties for acquiring loans.

The distinction between cash crops and food crops is not a useful one in Kakamega. Maize and beans are the most widely grown crops, and are produced both for family consumption and for sale. Within the last decade hybrid maize has been introduced to the area and is now grown by all but a few farmers. In contrast to the local maize, which provides about 6 90-kg bags per acre, hybrid maize can potentially provide more than 35 bags per acre if the proper husbandry techniques and fertiliser are used. In practise, farmers generally double their output with the use of hybrid maize. Coffee was also introduced to the area in the 1950s, but it is grown by less than 15 per cent of the farmers in this sample. Other farm and crop innovations include passion fruit, "European" vegetables such as cabbages, onions and tomatoes, and grade cows which double the daily milk output. Agricultural instructors are engaged in the promotion of new crops and productive practises associated with these innovations.

## PATTERNS OF SERVICE DELIVERY

In this section, four types of agricultural services are examined for the extent to which tney are differentially distributed to women and men.

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3. The national figures of one-third women remain relatively constant from the late colonial era until the late 1960s and are reported in the Ministry of Agriculture's Annual Reports. Figures about the portion of classes devoted to vegetable gardening and labels restricting courses to certain categories of wives were found in Kakamega District, Annual Reports for agriculture, 1970-1973.

These four include agricultural instructor visits, instruction at demonstration plots, courses at Farmer Training Centres, and loans. Visits are the most common service, followed by instruction at demonstration plots. Training courses and loans are less common but more valuable services, both in terms of cost to the agricultural administration and the benefit to the farmer. In addition, sex differences in farmers' sources of information about hybrid maize practises are also examined.

Most visits by agricultural instructors are not requested by the farmers, though a small number of farmers contact instructors and ask them to come to their farms. Since the majority of agricultural instructors are men, there is a potential problem in transmitting information to a female clientele, many of whom manage farms alone while husbands are working elsewhere. Communication between women and agricultural instructors who are not related by kinship might arouse suspicions, particularly when husbands are absent.

Farmers were asked whether their farms had ever been visited by an agricultural instructor and their responses are shown in Table 1.[4]

Table 1. Visits by agricultural instructors according to farm management types.

| | Female Managed | Jointly Managed |
|---|---|---|
| Farm Never Visited | 49% (42) | 28% (36) |
| Farm Visited at Least Once | 51% (43) | 72% (91) |

(Yules Q = .42; Signif. = .01; N=212)

The data show that farms managed by women are significantly less well served than jointly managed farms. About half of the farms managed by women have never been visited, in contrast to only a quarter of the jointly managed farms. It appears that the presence of a man has great drawing power for agricultural instructors making home visits.

It is important also to consider the position of women in jointly managed farms. There are several distinct husband-wife work patterns possible under joint management: in some cases husbands are employed locally and may take a managerial interest in the farm; in other cases husbands work on the

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4. See the sampling technique described in footnote 1. Because this is not a random sample, and thus does not proport to be a normal distribution, the chi-square tests of significance are technically not appropriate. The size of the sample may mean it approximates a normal distribution, and thus tests of significance have been included for exploratory purposes. Sample sizes of less than 212 indicate missing data or are subsamples as specified in the table titles. Numbers have been rounded off to the nearest per cent.

farm; in still others, husbands have failed to find outside employment but dislike farming and spend most of the day away from the home. On jointly managed farms many women are in fact alone at the farm during the day when agricultural instructors visit. When asked with whom the agricultural instructor speaks on these farms, a common response is "whoever is there", and that most frequently is the woman. When the husband is present during a visit a variety of communication patterns occurs depending on the personality styles of the couple and the agricultural instructor. While the general norm is for the husband to speak and to represent the household, this does not necessarily mean that the woman leaves the discussion or maintains silence. Women in jointly managed farms may have more frequent and direct contact with agricultural instructors than their husbands. It is difficult to determine, however, whether the quality, intensity and duration of the communication between an instructor and a woman whose husband is away for the day compare favourably with that between an instructor and a husband. Probably this varies with the personal style of the individuals involved. It is important to bear in mind that many middle-aged or older women have a strong sense of personal efficacy and considerable prestige, derived from their reputation as hardworking farmers and mothers of many children. Thus, with increasing age, the potentially problematic nature of communication between women and agricultural instructors may become less important.

A second type of service extended to farmers is group instruction on demonstration plots. Demonstrations are given on plots belonging to prominent farmers, and there are a number of women farm managers in the local elite category who make small parcels of land available for use as demonstration plots.

Demonstrations are usually announced at the weekly government meetings (barazas). This poses a problem for women, who rarely attend barazas because of time constraints and custom. It has traditionally been the man's responsibility to attend barazas, though during the late colonial era special women's barazas were organised. Barazas last several hours, as they function both for announcements and local judicial disputes. As a primary communication medium barazas function more for intra-male communication than across sex lines. Nevertheless, it must be recognised that messages are diffused to women from the barazas through neighbours, relatives and spouses.

Table 2 shows attendance at sessions on demonstration plots according to farm management type. As Table 2 shows, fewer farmers have attended demonstration sessions than have received visits from instructors, but the disparities between farm management types are less marked. The number of opportunities to attend demonstrations is relatively small; it is an extension method used widely only in the last decade. The lower rates for women managers

Table 2. Attendance at demonstration plot sessions according to farm management types.

| | Female Managed | Jointly Managed |
|---|---|---|
| No Household Member Attended | 62% (52) | 46% (59) |
| One or More Household Members Attended | 38% (32) | 54% (68) |

(Yules Q = .31; Signif. = .05; N=211)

indicate that they are relatively uninterested, unaware or unable to utilise this service. This may result from women's absence at barazas, where information is transmitted about demonstrations, or from constraints evolving from domestic and farm responsibilities.

For jointly managed farms, there is a greater likelihood that some household member has attended a demonstration. Among farms in this category, equal numbers of men and women have attended demonstrations. The explanation for this is twofold. First, male presence brings a farm directly into the communication network of the countryside by baraza attendance, the predominant medium for public announcements, or by communication with other men in social settings - men who may have attended a baraza. Second, the presence of two adult labourers on a farm may temporarily free one or the other from farm and child-care activities around the household.

Another indicator of services received is attendance at Farmer Training Centre courses. These courses vary in length, usually lasting one to two weeks. Though highly subsidised by the government, fees are required for attendance, amounting to Shs. 10/50 (approximately $1.50), which represents a sizeable sum to farmers without a regular cash income. Farmer Training Centre courses represent a valuable direct service to farmers as they are more intensive than other educational services and the instructors are highly qualified. Agricultural instructors or local administrators generally invite farmers to the courses though it is possible for farmers to request training. Courses are not well publicised however, which limits the farmers' awareness of their availability.

The nearest Farmer Training Centre to the research area is a 5 to 15 mile trip from most farms in the sample. It has been open since 1923. Table 3 shows the proportions of the sample who have completed training courses according to farm management type. The most striking finding is the overall low level of participation in training course given the proximity of the Centre. Aside from that, great disparities exist between female and joint managed farms, with four times more likelihood of training experience for the latter.

Clearly, as a vehicle for training in agriculture, this Centre is not serving women.

Table 3. Attendance at farmer training courses according to farm management types.

| | Female Managed | Jointly Managed |
|---|---|---|
| No Household Member Attended | 95% (80) | 80% (102) |
| One or More Household Members Attended | 5% (4) | 20% (25) |

(Yules Q = .66; Signif. = .01; N=211)

Husbands are often wary about wives being gone for extended periods of time, and in some cases the chief or assistant chief must persuade husbands to allow their wives to attend a training course. For women managing farms alone, a one- to two-week training period presents special problems, in that they must make arrangements for their day-to-day household and farm responsibilities while they are away. Of the 84 female managed farms in the sample, only 4 women had ever been to a farmer training course. Of the 25 jointly managed farms where some member had attanded a training course, 6 of those trained were women and the remainder husbands or sons. In a number of cases where sons were trained, they have since moved away from the farm and found employment as cooks and watchmen. In several cases where husbands were trained, it was evident that the men were old and, for all practical purposes, retired from active farm work. The invitation to be trained appears to be a status-conferring mechanism for some farmers. Nonetheless, it is an activity which requires farmer motivation as well, because it requires a good deal of time and financial commitment. Such examples illustrate the waste involved in training extended to a poorly chosen few. There is a greater likelihood that women trained will remain on the farm and engage in farm work after being trained than men. Most women are full-time farmers both in the sense of the number of hours they work daily and of continuity throughout life. Men, by contrast, tend to seek outside employment during youth and middle-age, and retire to the farm when old.

To acquire a loan, one must have either a title deed to land or a regular salary to serve as surety.[5] Title deeds are for the most part held

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5. These sureties are for the most common type of loan provided in the area from the Agricultural Finance Corporation (AFC) which has made loans available since 1973 when the sublocations studied had completed the land reform process and were declared adjudicated areas.

in the husband's name, and wage employment is more readily available to men who are more educated and have a wider array of employment options than women. Therefore, if a woman wants a loan she must persuade her husband, who then puts up a guarantee in the form of a title deed or salary. If husbands are not regularly at home, or are not interested in the farm, this may be difficult to arrange. The only genuinely independent women for loan purposes are widows, who can arrange legally to have the title deed transferred to their names ( a process much more complicated and costly for them than it is for men). The women who do purchase land are usually employed in the government or the schools, but they are few indeed given the population density and the high cost of land in this area. Putting title deeds in men's names, a result of land reform, has solidified male control over a powerful resource and this has obvious implications for acquiring other resources as well.

Table 4 illustrates whether the respondents knew anything about loans, knew about the procedures for acquiring loans or had actually received a loan according to type of farm management. What is striking is the few loans - only 3 - acquired by the 211 farm households, and these few loans went to jointly

Table 4. Loan information and acquisition according to farm management types.

| | Female Managed | Jointly Managed |
|---|---|---|
| Knew Nothing About Loan Aquisition | 99% (83) | 86% (109) |
| Knew Application Process or had Applied for Loan | 1% (1) | 12% (15) |
| Acquired Loan | -- | 2% (3) |

(Gamma = .86; Signif. = .01; N=211)

managed farms. When asked whether they had ever applied for a loan or were familiar with the process of application, an additional small proportion of the farmers could correctly describe the application process.[6] Quite significantly, only one of the total of nineteen households who had either received a loan or were familiar with the loan application process was female managed. That particular woman was not only wealthy, but also linked to the

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6. Given that AFC loans have only been available for three years, farmers who may have had their loan applications denied have not been formally notified, but have merely experienced delay in the response to their loan request. Therefore, that category of farmers who knew about loan applications but had not received loans includes both those who only knew the procedure and those who actually applied, but had not been notified, though their applications may be formally denied in the future.

local power structure: she was a member of the local development committee was married to another committee member (though he was absent), and related by marriage to the local politician.

Clearly, for ordinary farmers loan acquisition is not part of the repertoire of services either expected or desired. This is in great contrast to local elite farmers (not included in this study) who have access to other resources that make the risks of loan-taking less onerous. Nevertheless, the contrast in access to loans between men and women is quite striking, and these figures represent a farmer populace who have had access to A.F.C. loans for three years. Such grave disparities in the initial stages of loan allocation may grow wider, and the long-term consequences of women's lack of access to loans may prove significant.

Information about Hybrid Maize.

Correct husbandry practises are crucial for achieving high output from hybrid maize. Farmers growing hybrid maize were asked about their husbandry practises, and when most of them described some of the practises promoted by the agricultural extension service they were asked about the source of information for those practises. Responses to this question are given in Table 5.

Table 5. Source of information about hybrid maize husbandry practises according to farm management types (hybrid maize growers only).

| | Female Managed | Jointly Managed |
|---|---|---|
| Agricultural Personnel | 43% (35) | 72% (83) |
| Others | 57% (46) | 28% (32) |

(Yules Q = -.55; Signif. = .001; N=196)

Clearly, women managing farms alone learn from different sources than do respondents living on jointly managed farms. Less than half of the female managers had access to technical information directly from government officers trained in agriculture, in contrast to almost three-fourths of the respondents from jointly managed farms. Most women managers find out about hybrid maize cultivation at second hand from their neighbours, and this indirectly communicated technical information may lose something vital in the process of transmission.

SOME EXPLANATIONS

All farmers are entitled to extension services, and sex differences should have no bearing on the delivery of these services - that is, on choices made by agricultural instructors about whom to visit. In reality, however, sex differences appear to have a substantial impact on service delivery, as has

been demonstrated. Perhaps extension staff perceive women as unwilling or unable to adopt new crops and practises, and thus avoid visiting female managers. The data collected make it possible to test such assumptions to see whether they have any base in reality and might serve as an explanation for disparities in the delivery of services. In this section, we examine how economic standing, size of farm and early adoption of innovations affect patterns of service delivery.

Table 6 examines how economic standing affects agricultural instructor visits according to farm management type.[7] The data support other studies which show a tendency for access to services to increase with wealth. What is striking about the table, however, is not so much that poor women have the worst access to services, which is fairly predictable, but that this bias is maintained even at higher economic levels. In fact, the proportion of women farm managers at higher economic levels who receive extension visits is exactly the same as the proportion of jointly managed farms in the lower economic category which receive visits. Thus, the argument that women are justifiably ignored by extension workers because they have less access to the cash necessary to experiment with new crops does not hold.

Table 6. Agricultural instructor visits according to farm management types, controlled for economic standing.

| | LOW | | HIGH | |
|---|---|---|---|---|
| | Female | Joint | Female | Joint |
| Never Visited | 57% (28) | 39% (27) | 39% (14) | 16% (9) |
| Visited One or More Times | 43% (21) | 61% (42) | 61% (22) | 84% (49) |
| | (N=118) | | (N=94) | |

Similar reasoning on the part of extension officers might occur with respect to land: they may perceive that women hold small land parcels and lack space to experiment with new crops. The minimal size considered an "economic" holding by the divisional land board is four acres, though in practise the mean and median measures of farms are well below that minimum. There is a slight tendency for women managers to inflate low acreage categories because approximately a quarter of these managers are widows, whose sons and daughters-in-law utilise the major portion of their husband's land. Widows

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7. The scale for economic standing is based on house construction and consumption items within the house, including such characteristics as roof, wall and floor construction, and the type and amount of furniture.

are, in fact, somewhat more likely to receive services because of their age and long residence in the community.

Table 7 give information on only those farms which are over five acres. Women, as 40 per cent of the entire sample, are only slightly under-represented in the large farm category. Though the numerical size of this group demands cautious interpretation, it is evident that even among those women managers with extensive acreage a considerable bias exists in access to services. Farmers with large acreage tend also to have a higher economic standing, and thus both the money and land to try new crops and husbandary practises. Explaining away the bias against women on the basis of land size simply does not hold.

Table 7. Agricultural instructor visits according to farm management types (land size over five acres).

| | Female Managed | Jointly Managed |
|---|---|---|
| Never Visited | 38% (3) | 7% (1) |
| Visited One or More Times | 62% (5) | 93% (14) |

(Yules Q = .79; N=23)

Another assumption that might operate in agricultural instructors' minds as they neglect certain categories of their clientele might be a perception that women managers are unwilling to try new ideas. However, upon examination of mean numbers of cash or food crops adopted by farm management type, only very slight differences were found between farm management types[8] despite the additional labour available to jointly managed farms because of the presence of two or more adults.

Another way to examine responsiveness is to compare the speed with which farmers adopt new crop innovations. The most significant innovation in recent years for this area has been hybrid maize, and both female and joint

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8. For analytic purposes, these are divided into food and cash crops, though hybrid maize is included in both categories. The cash crops include the hybrid maize and bean combination, coffee, European vegetables (tomatoes, cabbages or onions), passion fruit and sugar cane. The food crops include the hybrid maize and bean combination, European vegetables, root crops (sweet potato or cassava), millet crops (finger millet or sorghum), and nut crops (groundnuts or monkey nuts). Mean adoption rates are as follows:-

| | Female Managed | Jointly Managed |
|---|---|---|
| Cash Crops | 1.5 | 1.5 |
| Food Crops | 1.9 | 2.0 |

farm managers had on the average been cultivating hybrid maize for 3.5 years. Further, a significant proportion of female early adopters, that is farmers who grew hybrid maize as early as five years ago or more, had never been visited by extension officers. Table 8 illustrates this finding. Almost a third of the

Table 8. Agricultural instructor visits according to farm management types (early hybrid maize adopters only).

| | Female Managed | Jointly Managed |
|---|---|---|
| Never Visited | 31% (5) | 3% (1) |
| Visited One or More Times | 69% (11) | 97% (33) |
| | (N=50) | |

women who were early adopters had no administrative support or advice on cultivating hybrid maize, while only three per cent of the early adopting farms with a man present were so neglected. This might suggest an even stronger innovative spirit among the female farm managers compared to jointly managed farms, perhaps due to the necessary autonomy and responsibility fostered by their independent situation. Despite this demonstrated responsiveness to innovation, the women managers tend to be ignored relative to their male counterparts.

It appears that these extensive inequities are a result of bureaucratic and communication biases against women. Early agricultural policy pronouncements were directed primarily towards men, and agricultural extension workers are mostly men. Also the patterns of communication in the society of Kakamega District tend to occur among one sex, rather than between the sexes. Although a study of administrative attitudes was not a prime focus of this research, we spoke with a number of male agricultural instructors and found about a third who expressed somewhat prejudicial attitudes towards women farmers. The majority did not express any overtly discriminatory attitudes. It seems quite clear than the neglect of women farmers has occurred rather as a result of customary communication patterns whereby men speak with men. This is evident in the following quotes from interviews with agricultural personnel:-[9]

> In the African way, we speak to the man who is the head of the house and assume he will pass on the information to other household members.
>
> Being men, of course it is easier for us to persuade men.

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9. The author spoke with a dozen male agricultural instructors at various levels in the administrative hierarchy in Kakamega. Several were interviewed a number of times.

On farms where there is a man present, women farmers may benefit from agricultural services because the presence of a man places the farm in the government communication networks. But women managing farms alone, who represent a sizeable portion of farm households in this area, are not in these communication networks and are thus ignored.

## POLICY RECOMMENDATION

Kakamega is an area in which food production, traditionally a women's farming concern, is a major focus of the agricultural administration. It is quite likely that inequities between farms managed by women and farms where there is a man present are even greater in areas where non-food crops, such as coffee or tea, are a prime concern of the administration. Non-food crops are traditionally though of as the province of men (despite the amount of work women do on these crops) and this attitude probably permeates the agricultural staff. More empirical research is necessary, however, to document the degree to which differential patterns of service delivery to men and women farmers exist in other parts of Kenya.

Based on findings reported in this paper, policy recommendations are made in the areas of staff training, administrative cooperation with women's groups and group training for women. Section 1 deals primarily with improving the effectiveness of the most common service, that of extension officer visits to farms, and Section 2 with group training.

### 1. Staff Training

As indicated in this paper, the relative neglect of female managed farms appears to be a direct consequence of an almost exclusively male staff and the ensuing communication patterns between staff and clientele. Two alternatives are available to planners who wish to increase women's access to extension advice: (1) altering male staff attitudes towards serving women farm managers, and (2) increasing the numbers of female staff.

A low-cost alternative, with immediate and short-term gains, would encourage male agricultural officers to visit more female managed farms and as a structural impetus behind this encouragement require that a log book be kept noting demographic details about farmers visited and the discussions which ensued. This information would be useful not only for analysing possible inequities, but also for enforcing greater equity among women and men farmers and identifying which staff members appear unwilling to serve a female clientele. A periodic review of log books would be appropriate either within the agricultural administration itself or within the Women's Bureau which is being set up within the Kenya Ministry of Housing and Social Services.

A second alternative, and necessary complement to the first, is to increase the number of female staff members at the field level where contact with farmers is greatest. This alternative attacks the problem on a more fundamental and long-term basis and it aims, ultimately, at a better integration of women within the agricultural service structure of government. Such integration also provides role models for rural women and sets a model of government action affirming a commitment to women's equality.

The goal of increased female staff is not to segregate service structures within the adminstration; that is, male or female staff should not restrict their contact to clients of the same sex. Efforts, however, should aim at improving the delivery of services to the entire farm clientele.

Two approaches could be taken to the task of increasing the number of female agricultural staff members: (1) increasing the numbers of women on the existing recruitment track, and (2) designing a special staff position for local women agriculturalists. With the first approach, the policy of training women agricultural workers and assigning them at the same administrative levels as men would be continued and strengthened. This is critical for integrating and improving the capability of the agricultural field staff. However, two arguments may be raised against this course of action. One might argue that training women is an unjustified expense because they generally reside where their husbands require, and might thus request transfers at higher rates than men. This argument might be valid in situations where women are not assigned near their areas, which will also probably be their husbands' home areas, but most agricultural field staff at the divisional and locational levels are assigned near their homes, and this pattern should not necessarily differ for women. Students of Kenyan agricultural administration note a high rate of transfer, and relate this to structural and decision-making features of the bureaucracy. This problem occurs among a largely male staff, and thus cannot be said to be related to the special problems of employing women. Studies of administrative transfer and staff requests for transfer should be made to determine whether having female staff members significantly reduces administrative flexibility and capability. At this time, there is no basis to assume that employing women agricultural workers will increase the problem of transfers.

Given the contemporary patterns of communication and authority (whereby women interact more frequently with women and men with men, and the men are presumed to hold political, administrative and family authority), it might also be argued that men are less likely to respond to female agricultural staff, or to recognise their technical authority and expertise. Yet cross-sex communication occurs in many settings, most notably in the church and educational spheres. Furthermore, the few women already employed as agricultural workers in

rural areas, such as the Home Economics Assistants (HEAs), appear to derive respect on the basis of their education and training, and prejudice based on sex does not appear to interefere with their work among male farmers. One HEA, who was assigned to a local multipurpose cooperative society, successfully spoke at group training demonstration plots on subjects ranging from passion fruit cultivation to cattle husbandry (traditionally thought of as the men's sphere) to a mixed audience. Again, research is needed to determine whether women in authority necessarily encounter special problems before automatically discounting their effectiveness. If women in authority encounter problems, planners must consider whether government policies should perpetuate the attitudes which create these problems, in contradiction to the government commitment to social equality.

A second way to increase female agricultural staff is to create a paraprofessional female staff by training local women in short agricultural courses at nearby Farmer Training Centres (FTCs). It must be stressed that this should in no way substitute for the long-term integration of women into the professional agricultural staff.

As has been made evident in this paper, extensive agricultural information is transmitted among women and is a key source of information about the adoption of new crops and associated agronomic practises. This diffusion of agricultural ideas depends on an ad hoc absorption of new technical information derived from the relatively few women who have attended training courses or barazas or who have received extension advice. The technical content of this communication might be improved by systematically training local women's leaders, and not just the wives of chiefs or agricultural assistants. There are a number of women in the local areas who are known as experts in farming. Further, the leaders of women's agricultural labour groups are already involved in organised communication networks well able to diffuse agricultural knowledge. In other ministries with programmes aimed at creating women's groups and training leaders, numerous problems have arisen from the artificial nature of the groups created. In agricultural activity, however, it is not necessary to create groups: they already exist and are easily identifiable to persons residing in the local areas. The groups have officers and collect and save money.

Women paraprofessional agricultural staff who already belong to such groups might engage in a number of seasonal agricultural projects in which they coordinate and advise collectively farmed plots. Despite the population density in agricultural areas, there are generally plots of land available for rent which women's groups might cultivate to increase their individual incomes, to form savings societies or to raise funds for specific goals. In western Kenya,

food crops such as maize and beans are the most profitable, are easily marketed locally (thus without large transportation costs) and are in demand throughout the year. As an initial source of capital for women's groups embarking on cooperative cultivation ventures, short-term agricultural loans could be made available on an experimental basis. These loans should not require title deeds or salaries as security, as this has hindered most women from acquiring loans in the past due to their limited access to such resources. Repayment would be made in the form of cash or maize, which is paid for by local agents of the Maize and Produce Board. Although no studies have been carried out on sex differences in loan repayment (largely because so few women are able to acquire loans), there is widespread agreement among agricultural instructors and residents of the study area that women's repayment rates would equal or surpass those of men. This attitude may reflect perceptions of socialisation differences between the sexes, or of women's insecure position in a patrilocal system which serves to increase their concern about the negative consequences of loan default. Though not discussed in this paper, an examination of repayment rates for loans recorded in the register of a multipurpose cooperative in the area shows that women had a slightly higher repayment rate than men. (The number of femals registered was quite small, however, and the results demand cautious interpretation.)

Women paraprofessional staff might also engage in advisory activities, similar to agricultural instructors but concentrating on smaller areas than the sublocations, such as the area covered by a Liguru (neighbourhood leader). These women could visit neighbouring farms, occasionally give talks at demonstration plots and communicate information about other agricultural support services. Some salary or stipend for these women paraprofessionals would be necessary: in the past community development programmes have encouraged voluntary labour by women's leaders and have failed in part because they gave no recognition to the extensive time and effort these women gave.

2. Group Training

The various levels of group training for farmers can be distinguished by the amount of time farmers must expend to absorb specific agricultural information: lectures at barazas and demonstration plots require less than a day, and courses at training centres require more, often a week or two.

Group training represents an efficient and effective way to transmit and demonstrate agricultural skills to farmers. As has been shown, unequal access among women and men farm managers to group training sessions at demonstration plots is less marked than with other services. At present, demonstrations are given less attention by the agricultural administration than

individual visits, but a greater effort should be made to provide additional demonstration plots. Given the labour constraints and child care responsibilities under which women operate, sessions at demonstration plots are better able to fit in with their needs than courses at training centres. These short sessions, moreover, require no financial expenditure from the women, either for attendance fees or transportation.

Yet women's attendance is often limited by lack of information about training sessions at demonstration plots. This may be linked to the predominance of men at barazas where such information is transmitted. Greater care should be taken to include women in the communication network for government announcements by encouraging women to attend regular barazas or by periodically calling special women's barazas. Agricultural demonstrations may be announced at barazas or may be carried out at the barazas themselves.

Courses at Farmer Training Centres are not likely to attract great numbers of farmers, given fees and transportation problems. Attendance represents a special difficulty for women who must arrange for their domestic and agricultural responsibilities to be carried out by others while they are absent. If the husband works away from home it is virtually impossible for the wife to attend a course unless she is free of child-care and agricultural responsibilities. Younger and older women without young children could attend courses at cetain seasons of the year when their agricultural workloads are smaller, such as after the harvest or at ploughing time.

The appropriate programmes for women at Farmer Training Centres are those available for all farmers. Currently, women are channelled into special home economics programmes where only a small portion (usually a third or less) of class time is devoted to explicitly agricultural topics. Women participate in virtually all aspects of the farm operation, including planting, weeding and harvesting of food and cash crops, and animal and poultry husbandry, with the exception only of ox ploughing (and this is done by women in other parts of Kenya: editor's note). Given the broad scope of agricultural work for which women are responsible and their important decision-making role, directing women into home economics courses inappropriately narrows their training experience.

## CONCLUSION

In this paper, extensive inequities in the provision of agricultural services were shown to exist between farms managed by women and farms with a man present in one location of western Kenya. Indeed, the difference in access between women and men increases as the value of the service increases. Despite these inequities in access to services, women farm managers appear to be as productive and innovative as men farmers. This is explained by the prolific

associational activity among women, where agricultural information and labour are exchanged.

A number of policy recommendations have been made which might alter the disparities that exist between the sexes in access to agricultural services. It is essential that special attention be given to those inequalities, accompanied by genuine administrative commitment to reducing them. Though not reported in this paper, a part of the research involved assessing another highly serviced administrative area in terms of staff density and support services. Though absolute levels of services to women managers increased relative to the less well serviced area, grave disparities between the sexes remained at a level comparable to that of the less well serviced area.

Some might argue that the least costly and most effective policy would be to maintain current patterns of inequity, given the fact that women's innovativeness and productivity were shown to be equal to men's in the sample studied. However, a comparison of the two sublocations in the sample, which differ according to population density and level of administrative services (historically biased towards men), shows that women farmers cannot maintain their equal productivity in the face of lower administrative support over time. The equality in productivity occurs when the general level of services is low, but informal communication and mutual aid may not be able to compensate for the increasingly valuable services that are being made available to male farmers by the government. Systematic and extensive privilege granted to one sex over the other across a period of several decades takes its toll, and this is highly likely to offset women's ability to innovate and productively manage their farms on their own. Therefore, immediate measures are necessary to redress the inequitable treatment of women farmers. If discriminatory patterns are not altered, prospects both for women's productivity and for increasing the general level of agricultural productivity appear limited.

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