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INTRODUCTION

In January, 1987, I was fortunate enough to be part of a team of researchers conducting the first phase of an investigation into social and economic factors affecting the success of the Bakel Small Irrigated Perimeters. The other team members for this phase of the project were Peter Bloch, an economist and the principal investigator of the project for the Land Tenure Center, and Tidiane Ngaido, a Mauritanian specialist in land resources along the Senegalese River valley who received his training at the University of Wisconsin.

My responsibility on this two-week visit to the Bakel region was to investigate the past and present role of women in the Toucouleur and Soninke villages with irrigated perimeters. The objective of this visit was to obtain information about women's roles, broadly defined, and to generate research and policy questions that could be investigated further in the remaining two years of the project. The following report summarizes what we did during our two week trip, and, what I learned about women's roles in the small irrigated perimeters in this region.

A. Method

With the help of several interpreters, the three researchers were able to visit 14 of the irrigated perimeters and conduct half-day long interviews with village representatives for the irrigated perimeter projects. During our two weeks in the Bakel region, we also visited a number of other villages and made initial contact with their irrigation project representatives. However, for a variety of reasons, we were unable to do interviews with a number of these groups.

We conducted interviews with groups of farmers in ten Toucouleur villages (Dialinguel, Sinthiou Dialinguel, Guitta, Alahina, Nayé, Selling, Wouro Himadou, Sinthiou Débékoulé, Sénoudébou and Sébou). We also interviewed representatives from four perimeters in three Soninke villages: Aroundou, Ballou I and II and Gangala; I also gained some additional information from an interpreter, who had also worked with SAED on the perimeters, on some aspects of the organization of the perimeters in Mouderi I and Mouderi II, which are also in a Soninke village.

Most of our interviews were conducted with all three researchers present; usually there was one other male interpreter with the team. One of the team members posed questions in French to the group; the

interpreter then translated them and the group's responses. All three team members wrote field notes summarizing answers, and all three interjected questions during the course of the interview when answers were unclear or new questions arose.

The composition of the groups that we met with was determined by village representatives. We set a date and time for the interview and asked them to convene the "group" concerned with the irrigation projects. Because in every village the group convened was entirely male, we requested separate meetings with women's groups concerned with the perimeter, when they existed. In these latter meetings, I was the principal interviewer, aided by a male interpreter, and the other members of the team were usually not present.

Because our interviews suggested that there were distinct ethnic differences in the organization of the perimeters in the Toucouleur and Soninke villages, this paper reports results for each ethnic group separately as well as general results.

B. Results

The interview questions concerned with women's roles focused on understanding of traditional work patterns of women and men; women's involvement in agriculture versus other economic activities; their responsibilities toward the family; traditional uses of and decision-making power over the produce of their fields; land tenure questions; and perceptions of problems related to the introduction of the irrigated perimeters.

We had greater access to Toucouleur villages in the irrigated perimeter region than to the Soninke villages. This was unfortunate in some ways because we found that women were official members of the irrigated groups in only two of the ten Toucouleur villages, while they were majority group members in all of the Soninke villages in which we were able to do interviews. This difference was not surprising given our prior knowledge about women's participation in traditional agriculture in the two groups; however, because we had fewer Soninke villages in which we could do interviews, the information we could obtain on women's roles in the irrigated perimeters is limited. While interesting information was obtained, future research should expand the interviews to include more of the Soninke villages.

Our interviews showed that in both ethnic groups women did not have long-term secure rights in land on the irrigated perimeters. With a couple of exceptions, which I will detail in the body of the report, Toucouleur women do not have parcels in the irrigated perimeters. Soninke women all have parcels, but they do not have rights to land beyond death or divorce. In most cases, women who had gained access to irrigated parcels would have to yield control of these parcels to male family members upon their death or divorce.

Furthermore, women generally have smaller parcels of irrigated land than do men, if they have any at all. Women were also rarely involved in decision-making processes on the perimeters. In every village visited, the executive officers of the irrigated perimeter groups (president,

vice-president, treasurer, etc.) were all men. As was evidenced by the gender composition of the groups with whom we met, decisions are made predominantly by the male members of the group, and/or by the male chiefs of households/compounds. Again, some village systems differ from this pattern, having, for example, a separate organization for women involved in the perimeter. But, even in such cases it appears that major decisions are made by the male members of the group or the men's group.

The men involved in the perimeter make decisions about such questions as access to water, gasoil (diesel fuel) and fertilizer; parcel sizes and distribution procedures; where the irrigated perimeters would be located; what crops would be grown, etc. In only a few villages was there evidence of women's participation in these types of decisions or of their equitable, unproblematic access to resources needed for successful exploitation of the perimeters.

Again with several exceptions, when women are involved in the irrigated perimeters they do not have to pay fully for the cost of their parcel, for the cost of gasoil, fertilizer, transport of produce, machine repair costs, etc. In addition, in most cases women did not participate fully, or at all, in the initial work to clear the land that was used for the irrigated perimeters. In addition women are not usually responsible for the repayment of the debts to SAED. Therefore, while women are excluded from many aspects of perimeter functioning, they also bear fewer of the costs involved with keeping the perimeter functioning.

These conclusions must be tempered by the wealth of individual variation we observed across the two ethnic groups, across villages, and sometimes within villages when they had more than one perimeter. Therefore the bulk of this paper reports the specific details of perimeter operation for the two ethnic groups, between and within villages. Details from our village interviews will be given below, and then another attempt at generalizations will be made.

I. TOUCOULEUR VILLAGES

A. Background

The Toucouleur villages were usually significantly smaller in size than the Soninke villages (several hundred inhabitants versus two or three thousand), and membership of the irrigation groups is correspondingly smaller in Toucouleur villages. Another reason why Toucouleur irrigation groups were smaller than those of the Soninke is that women are usually not included as parcel holders or group members, while they are in the Soninke villages. The exceptions to this statement will be described later in this paper along with other information related to why and how women were or were not involved in the perimeters.

The Toucouleur are Pulaar-speakers, formerly herders and nomads who have now settled along the Senegal and Falémé Rivers. They have maintained ties with Peul animal herders, and frequently men and women retain some of the cultural and socio-economic traditions of the Peul.

While the Toucouleur in the villages we visited are primarily sedentary agriculturalists at this point in time, some of the traditions of their cultural history appear to affect the way they work on the irrigated perimeters.

Consistent with their former nomadic traditions, Toucouleur seem to have relatively small villages, and Toucouleur family size appears to be smaller than Soninke family size. While the details of household size, number of children, etc. was not obtained on our January trip, it was also apparent that Toucouleur men had fewer wives (averaging fewer than 2) than the Soninke men did.

Toucouleur villages are situated in a separate region of the river basin from the Soninke villages, with a well-defined border between them. Many villages are very difficult to reach, and are far from good roads, large market centers, medical and educational facilities. In contrast to many of the larger Soninke villages, only one or two of the Toucouleur villages we visited had a clinic or primary school within close proximity of the village. While migration out of this region to France or African cities for work is substantial among the Toucouleur, it appears that the rate of migration was probably lower than in Soninke villages, where nearly all adult males had some migration experience.

Another factor which may explain inter-ethnic differences in behavior on the irrigated perimeter is soil quality. A SAED official told us that the land used for irrigation in most Toucouleur villages is not as good as the land on a typical Soninke perimeter. While I do not have direct support for this statement, it is important to consider this as possible background, along with cultural traditions when one considers traditional and non-traditional economic patterns.

B. Traditional Work

According to our interviews, men grow the main hivernage (rainy season) subsistence crops -- peanuts, corn, and millet -- as well as most cash crops. It was not clear to me which, if any, crops were grown by men during the dry season. Men also raised livestock, but Peuls were responsible for grazing them. During our interviews with men, we learned that women did not do much agriculture; according to the men women did not know how to do certain things, and were not "strong enough". These statements were given as explanations in several villages for women's nonparticipation in the irrigated perimeter schemes. On the other hand, when we asked about women's economic activities during different seasons, we were told that women frequently helped their husbands on their own traditional and irrigated fields. In addition, women had individual plots on dieri (upland) land where they cultivated peanuts during hivernage, and in several villages we were also told they grew rice on walo (flood-recession) land during hivernage. In addition, women appear traditionally to grow some vegetables during the hivernage period and into the dry season, on land close to the river; tomatoes, niébé (cowpeas) and okra were mentioned in several of the interviews. Finally, in addition to their agricultural activities, women were responsible for milking goats, small animal husbandry, and some sold milk. Domestic and child care work was women's work in addition to these activities. We have not yet

obtained quantitative estimates of the time allocated to these various activities. We also have no data to examine whether women's activities varied by caste or by other socioeconomic characteristics such as age, status within the family, etc. As noble class family women may do little economic work, caste in particular might be one important variable to consider in examining women's activities in general, and in particular with respect to the irrigated perimeters.

C. Women's Rights and Responsibilities

While much more detail would be desirable, the interviews provided some useful information concerning traditional rights and responsibilities related to land and economic activities that could affect women's role in the irrigated perimeters. Women appear to get married at approximately 13 years of age; until they are married, they have no rights to own land. When they marry, however, a woman can request or be given land to farm as traditional dryland women's fields. In the few villages where women have parcels in the irrigated perimeters, or might have in the future, this same rule applies. Land is considered to be a woman's property while it is being used; however, in the case of a woman's death, it would normally go to the husband, to one of his brothers, or to her sons (usually oldest). If a woman's sons are too young, or if her sons already have land, and the family agrees, women can inherit land; the decision appears to be somewhat flexible with older male members of a family and older sons deciding whether a woman can inherit or not in a particular case. As in many African societies, the general rule is that land stays with male members of the family; but individual cases allow some women to own land. Finally, in the event of divorce, a woman is allowed to keep her land as long as she does not remarry; if she remarries, the land returns to the husband's family.

The head of the household has broad responsibilities for feeding his family, according to our respondents. In general, money women earn and crops they produce are theirs to do with as they please. In a number of villages we were told that a woman's obligation to the family is to donate some of her produce (several sacks of peanuts or rice) to the head of the family, and the remainder could be used for her clothing, jewelry, or for any other need she perceived important. While men have responsibility to feed the entire family, they apparently are particularly responsible for their sons. Women, on the other hand, have responsibility to clothe and provide jewelry for their daughters, and this responsibility is probably larger as daughters attain marriageable age. Finally, several examples were given to illustrate women's responsibilities. In one village, women's peanut crops were purchased by their husbands for the family. While the women had some responsibility to give some produce to their children, the remainder, which was probably difficult to transport to the open market, was purchased by the husband at lower than market price. This saved the husband and the entire family money, compared to the market price, and provided a source of income for the women, although not at the market price. In other villages, male respondents said that women produced just enough for the family and a little extra for their "petits besoins" (jewelry for daughters, etc.). In the two villages where women were participants in the irrigation scheme (Sénoudébou and Sébou), this pattern of right to their own produce and income from it appeared to be the same; however, this would be important to examine more closely.

D. Women's Participation in the Irrigated Perimeters.

As mentioned earlier, women had parcels in the irrigated perimeters in only two of the ten Toucouleur villages interviewed. Still, it is just as interesting to understand the cases where they do not have land as those where they do. Given the small number of villages, it is possible to present some background on each with respect to women's initial, current, or possible future involvement.

In Dialinguél, a village of nobles and Peul herdsman, traditional activities focus on cattle and small animal husbandry, with agricultural activities playing a secondary role. Rice and corn are primary crops in the irrigated land. The group representatives told us that women did not help in men's traditional or irrigated perimeter agricultural plots. They did however do traditional economic activities -- peanuts, millet, and some animal husbandry. Women have individual plots of land for agriculture and this land is owned by a woman's husband and given to her to cultivate. There was no information on why women were never involved; the irrigated perimeter census shows that a few women are on list of parcel holders due to individual family rules and customs concerned with death or divorce.

In Sinthiou Dialinguél, a village of nobles and former slaves, women do not have parcels but they were reported to help their husbands in irrigated rice fields. They work in their own dryland fields for 3-4 days of the week, and help their husband's in the irrigated fields for the remainder of their time in agricultural work during 3-4 days of the week. The group representatives, when asked why women weren't involved, suggested that rice was difficult for women to cultivate. But this was moot because the perimeter was not operating.

In Alahina, a village that used to share a perimeter with the larger town of Kidira, a new perimeter is to be started soon. The group representatives (all male) suggest that women were not involved in the Kidira-Alhina perimeter because of land shortage or because that combined group did not want this. If and when the new perimeter starts in Alhina, however, women will be involved. Their plan is for a man's wives to get a parcel one-half the size of the man's; the wives' land will be divided among the wives. They also plan for women to pay their own costs, as the men do, and, following tradition, women will keep the majority of the produce for her own perceived needs.

In Nayé, the women do not have parcels on the irrigated land. While one group representative said that women never asked for parcels, in a later part of the interview, another suggested this wasn't quite true. Indeed, the following reason was given, which suggested another viewpoint entirely: "women want parcels, but there isn't enough for the men; therefore there certainly isn't enough for women." In this village, it was explained that women's agricultural produce was largely kept for her own needs, while the men's work was for the larger good of the family; therefore, it was reasonable that men had the scarce irrigated land, while women did not.

Wouro Himadou's perimeter was barely functioning at the time of the interviews. The President of the group said that women would be involved

if the perimeter began again. Ninety women had requested parcels in the irrigated perimeter, if an extension of the former perimeter takes place. When the perimeter was functioning, women helped their husband's in their irrigated fields, and the size of a husband's field was dependent on the size of his family. Produce from the husband's field went to the entire family, according to the custom. According to our respondents, if a husband is away (e.g., in France), his wives can work his fields or parcels in his name; the produce goes to the family.

In Selling, the perimeter was working, but, again, women had no parcels in the perimeter. The group suggested that women had wanted to have parcels from the beginning, but there was insufficient irrigated land. Even now, with more land, or even if there were an extension, the group we spoke with suggested women would not be participants: "the cost of including women was too high". Costs appeared to relate to the cost of land preparation, the potential cost to men of seeds, gasoil, fertilizer, for women's fields, the cost of giving up irrigated land, or the cost of giving up land with little "family" benefit. It was clear that the men felt there would be no benefit to them if giving land to women.

In Sinthiou Dèbékoulé, the men of the project were growing corn on the irrigated perimeter. In our interviews, in contrast with the other villages (see above), the men said both men and women were to have land from the beginning of the perimeter. However, women's traditional crop was rice and men's traditional crop was corn. A plot of land 2 kilometers from the village was selected for cultivation, and women were to do rice, while men would do corn on the irrigated perimeter. Unfortunately, the land selected flooded, and equipment to keep the land from flooding could not be obtained; women's fields were inundated, according to the men, and they could not cultivate rice there. Therefore, the women's land was taken over by the men for corn cultivation. The women helped the men on their parcels. If an extension goes through, the men said women will get land first in the extension, and, if they cannot do rice, they will grow vegetables or another crop.

Finally, in Sénoudébou and Sébou, women were involved in the irrigated perimeters. In Sébou, women were involved, apparently, as partial repayment for land they lost to the irrigated perimeter. In the first year of the project, only men were involved and they selected land owned by the village chief near the river, and close to women's traditional rice fields. In the second year, an expansion of the irrigated land was possible, and women's rice fields were taken; in partial payment, women were offered the right to have parcels in the irrigated section. In this village, where women had several nonirrigated traditional crops, we were told that women were quitting traditional crops for work on their own irrigated parcels.

In Sénoudébou, the women were involved from the beginning, although they were given sizably smaller parcels than men (4 x 4 meters for women and 25 x 50 meters for men). The male group members decided that as women paid nothing to SAED for gasoil or the pump, or to repay the debts, and as their produce was kept for their own needs, that women should have less land. Also the men suggested that land would return to men in the case of a women's death, because of costs initially incurred by men in land preparation, and some debt repayment.

In S noud bou, a separate interview with a women's group was arranged and this sheds some light on women's perspectives and issues; many questions remain, however, and this would be an interesting site for further research. The women said they had received training from a technician in vegetable gardening (tomatoes, onions, eggplant, greenbeans, cabbage, etc.) at the beginning of the irrigated perimeter project. Originally, 80 women were involved, and now there are 150 (compared to 114 men). While they grow vegetables, they would like to expand and grow rice and corn, if given more land. The women also suggested that they had some difficulties. First, they had to pay for gasoil and fertilizer, and they sometimes ran short of money, or could not get access to the available gasoil or water supply. When this happened, they needed to get water from the river. The river was dangerous because a hippopotamus was in this region, and frequently came out when they were near, and also came out at night and destroyed their vegetable crops. Despite the difficulties, they have been able to make some profit, and collectively, rented a plow to prepare land for this year's cultivation.

E. Summary of Issues and Questions

These descriptions of women's roles in the irrigation projects in Toucouleur villages are brief; more information is available from the author's trip notes on request. Direct interviews with women in the villages, despite their lack of participation in the irrigated projects, would have given much more information and should be carried out in further field visits. Nevertheless, despite the fact that relatively little information was obtained, several points are clear:

First, most Toucouleur women do have experience in a variety of types of traditional cultivation in the Toucouleur villages, and, while they may need more training to work on irrigated land, most women appeared to want parcels in the irrigated land (Note: noble Toucouleur women may not have this experience, and they may be the exception to this general point; this should be studied).

Second, by tradition, Toucouleur women have the right to the vast majority of the produce from their own lands, and, in the two villages where women have land in the irrigated perimeters, they do keep their right to produce.

Third, because women keep the profit from their agricultural work, cultivation or ownership of land in the irrigated perimeter is not perceived by men to be beneficial to them, or the "family"; it is perceived to "cost too much".

Fourth, because irrigated land is scarce in the Toucouleur villages, men have decided that women's requests for parcels should wait for extensions of the irrigated perimeters; hypothetically, with extensions, women will have parcels in most of the villages, and their produce will be their own.

Fifth, women have had little power in making important decisions regarding the irrigated perimeter project; in most cases, this has resulted in their exclusion from the irrigated perimeter schemes, while in

others it has resulted in decisions to give women less land than men, or than they want (e.g., Sébou), selection of land far from the village and household work (e.g., Sinthiou Dèbékoulé), land that reduced their traditional hibernage land to cultivate (e.g., Sènoudebou), primary crops that women were unfamiliar with (e.g., corn), less control of access to water when desired, or knowledge about gasoil, fertilizer, plow use/payment.

Finally, while some women may not want irrigated parcels (because of their noble caste background, because they have too much work to do already, or because they do animal husbandry, to give several possible reasons), most women do want parcels; their absence from all work on the irrigated perimeters, when this occurs, deprives the project, the village, and families of workers and general profit from the irrigation scheme. As available research suggests women's income goes back to the family in the form of increased child nutrition and health, school fees and supplies, potential increased education for women, possible decreased family fertility, the elimination of women from the scheme seems culturally understandable, but ill-advised for long-term policy and village/regional benefit.

II. SONINKE VILLAGES

A. Background.

As mentioned, Soninke villages were frequently more like towns than villages, with several "villages" having populations of several thousand people. Families were larger, and men were likely to have more wives than in the Toucouleur families. Family "work groups", or the available labor supply for family work, was theoretically greater than in Toucouleur villages. There would be more adults and children to participate in various economic activities, as well as more adults and children to do necessary household and child care work.

The Soninke villages in which interviews were done were reasonably accessible by road. There were stores, local markets for food and dyed and woven fabrics. In each village, there was a primary school building and, in Aroundou at least, a clinic. In short, there were a variety of indices of access to resources that were not as obvious in the Toucouleur villages that we visited.

B. Traditional Work

The Soninke are well-known for the tightness of their family organization, and have a tradition of collective farming as well as individual farming. Agriculture has been a primary subsistence pattern for the Soninke; in addition to farming, Soninke family and village organizations have sent many men to France, Dakar, and elsewhere as migrant wage-laborers over the past 25 years. Much of village income and sustenance during the drought years came from this source.

Women as well as men are farmers, by long tradition. While men are more likely to grow millet as a traditional crop during hibernage, women are more likely to grow peanuts in dieri land during hibernage and rice,

plants used for dyeing fabric, and vegetables in walo land during hivernage and the dry season. Farming is frequently done in collective work groups on both collective and individual family fields. There is also a tradition of collective fields within a village, where families will work together and the proceeds are used for village purposes (e.g., to pay for medical care or pay for travel expenses to France for village men).

Family collectives consisting of women's and men's work groups work on family fields; male work groups help to clear land, plow, weed, and harvest, while women also help to prepare land, plant seeds, weed, and participate in the harvest. Our interviews suggested that women work together, moving across individual or collective parcels, and men work together across individual or collective parcels; women and men do not work at the same time; men work earlier in the day, while women work later in the day after household tasks are completed. Finally, work on various fields, when there are more than one (e.g. dieri and walo fields) seems to be done during different days; for instance, in an interview in Ballou (Ballou I), the women said they worked 1-2 days on traditional fields, and several days on irrigated fields.

In addition to agriculture, women also do traditional dyeing and weaving, some of which is sold in local markets. Women's work also includes household tasks and child care, although it is not clear that all women do all types of work; it may be, for example, that later wives are responsible for household/child care work, while older and earlier wives take more responsibility for agricultural work in the family. It also may be true that there are caste differences in types of work women do. More thorough background work on Soninke work organization, as well as time allocated to different activities, by season, would be helpful here (See Adams, 1976, 1985; Pollet & Winter, 1971; Keita, 1983).

C. Women's Rights and Responsibilities

As in the Toucouleur villages, it seems that Soninke women marry early, around 13-15 years. At this time, they can be given land to farm, and, in the Soninke villages, husbands also gave their wives the required fees to have a parcel in the irrigated perimeter (e.g., in Aroundou, 2500 CFA was required initially for women to have a parcel).

Inheritance typically stays in the male lineage, as with the Toucouleur. If a woman dies, her land returns to her husband's lineage, or goes to her eldest son. In divorce, the rules are somewhat more flexible, it seems; if a woman continues to work her land, she can keep the parcel of land even if married to another. In the irrigated perimeter, this rule was still slightly different: In Ballou I, for example, they said that if a woman divorced, the irrigated land stays with the woman and the second husband if he is a member of the irrigation group; if the second husband is not part of the group, the land goes to the first husband, and the woman loses it for work. Finally, if a wife divorces but never marries again, she keeps her parcel and works it for herself, including costs associated with the parcel, which the husband usually pays as long as she is married to him.

Produce from family-owned fields is considered to be the property of the entire family, even when women have some parcels they call their own (e.g., Aroundou). In Ballou II, however, this pattern is somewhat different, perhaps because of the way the perimeter has been organized (see next section); while women have some individual parcels, they keep produce that they sell for themselves. Thus, the family field, composed of men's and women's parcels, traditionally is the family's, not a man's or a woman's. Produce and profit from crops grown are given to the head of the household, who returns several sacks of millet or another crop to each of his wives for their own needs ("petits besoins"). The remainder of the produce or profit is, theoretically, kept for the entire family, and is marketed and distributed by the head of the family to others in the family. With the exception of Ballou II, women labor for the family, in general, but have little direct control of produce or profit from their labor.

In the Soninke villages, therefore, men traditionally have responsibility for the family. They give land to each of their wives upon marriage, most of which is attached to the general family field and from which proceeds go to the family head to redistribute. Some of the women's fields may be considered to be a woman's own, but it seems that, even in these fields, there is little extra profit for women. Proceeds from dyeing and weaving, of course, are a woman's to keep and spend for her needs. Women's needs, based upon our brief interviews, are similar to those of the Toucouleur women: women buy their own clothing, jewelry, and are responsible for clothing and jewelry for their daughters, especially when they are to be married.

D. Participation in the Irrigated Perimeters

Fairly complete interview data were obtained from only two Soninke villages, Aroundou and Ballou. In Ballou, there were two perimeters (Ballou I and Ballou II). In addition, some information was obtained from an interpreter concerning women's participation in the irrigated perimeters in Mouderi. Because so few of the total number of Soninke villages with irrigated perimeters were involved in interviews in January, comments about Soninke women's participation in the irrigated projects are made tentatively; general and generalizable conclusions cannot be made until more representatives from other Soninke villages are interviewed.

In both Aroundou and in the first perimeter at Ballou I, the groups were formed with both men and women parcel holders. Farming was collective during the first several years, and then individual parcels were given out to men and women in different village families; some of the irrigated perimeters in both villages was reserved for collective fields that would be used, for village purposes, or in the case of Ballou I, to repay debt to SAED.

In Aroundou, approximately 30 members of the village (men and women) started the idea of irrigated perimeters before SAED technicians came; they prepared the land and dug a canal by hand and grew millet in the field. When a technician came to help, he gave them a pump, and in a following year told them to grow rice, because of its greater profit undoubtedly because they

were more familiar with growing rice than men; they realized a profit, apparently kept the money, and the following year even the men decided to try rice. They succeeded and produced 3 tons of rice, with corn on the side. The perimeter's initial success drew in other participants; now there are over 200 members of the group, over half of whom are women.

Although Aroundou did not operate its irrigated perimeter during the year preceding our interview, the village expected to resume farming it the following year. The decisions they made during the earlier years would be continued when they started again.

When the Aroundou group moved to individual parcels, they decided to give women half of the land that men were to get; women also had to pay 2500 CFA to join the group after the first several years, while men paid 5,000 CFA. Now the charges are 5,000 and 10,000 CFA, respectively, and women have parcels half the size of the men's. When asked why women had less land and less cost, and who decided this, women said that they had decided to have less land than their husbands because of the work involved in rice production; they knew rice and knew how much work was involved and decided to have less because of their need to do household and other agricultural work aside from the irrigated parcel work. In addition, in separate interviews with women, a leader of the women's group also added the following comment: "It is the husband who decides and the wives follow the husband's decision."

Aroundou women said they work for their "family"; there is nothing left over for their own needs or personal responsibilities; everything is given to their husband for family food requirements. They suggested this was normal -- that they work for their husband, to add to the family coffers. In response to my question, "What would help?", they only complained about too much work, and that they had to do everything by hand. They said they would love to have a hand plow to help them in the irrigated and traditional field work.

In Ballou, technicians came and suggested that rice be grown on an irrigated perimeter. A general call was made in the village for anyone who wanted to participate in the project (men and women, no distinction). There was a 50 CFA inscription charge, and for 3 years all produce was collective and put in storage. At the end of three years, they began to sell the rice at below market cost. Now they have collective as well as individual fields, and each participant pays 20 kilos of rice to the collective storehouse to repay SAED debts.

Ballou I men proposed individual fields to the women members who agreed; everybody had equal parcels, however, in this village. This decision was briefly explained in the following way: "Everybody agreed. Everybody started together with all the work and then the separate work began. All of the produce comes back the house (family); it doesn't matter who has more or less, or who commands."

The work organization in the Ballou I perimeter follows this logic. The men and women of a family work cooperatively on the different parcels in men's and women's work groups. Here men work earlier, and women work later in the day. Because all goes to the family, the men apparently

finish up what needs to be done, even if the women do not have time for some things. Similarly, if a husband had migrated to France or elsewhere, the co-wives and their families work together in the common family name and distribute the proceeds among the family members.

Women in the Ballou I group earned their own money from cultivation in other "traditional" fields and through selling their weaving and dyed fabrics. In addition, in 1986, the Ballou I women succeeded in acquiring separate irrigated parcels for themselves, in addition to their family collective parcels. They acquired the land because a second Ballou perimeter was formed after a schism by some of the former Ballou I participants (see below); in the new perimeter, the Ballou I women are able to work for themselves and keep the profits from these fields; in addition, they reported they hoped to have better control of water (hire their own pumpist), and other resources that have been difficult to reliably obtain while a part of the joint family parcels.

Ballou II, one of the newest and seemingly most dynamic perimeters, was started after a dispute between the leaders in Ballou I resulted in a splinter group requesting the development of a new perimeter. In Ballou II, the men and women are allocated equal amounts of land, as they were initially in Ballou I. In addition, there are three collective fields, one for repayment of debt, one for help with children's school expenses, and a third collective banana field. Women's output goes to the family, with women gaining some private money from sales from their traditional hivernage fields. In the perimeters, the men and women have work groups with their own leaders. The leaders of both the men's and women's groups get together to make scheduling decisions, crop decisions, etc. Nonetheless, as in all other villages, the president, vice-president, and treasurer of the Ballou II perimeter were men.

Finally, in Mouderi I and Mouderi II, there are both similarities and differences from the other Soninke villages described above. In Mouderi I, men and women have equal allocations of land that become a part of family fields. In Mouderi II, on the other hand, men have parcels along with women heads of households; other women have not had their own parcels. In Mouderi II, however, women have requested that a third perimeter be developed by SAED for their own needs; this perimeter, in theory, would be the first that we have information on which would be developed and controlled by the women, without male participation, and without the requirement of women's continuing participation in another irrigated family field.

E. Summary of Issues and Questions

Women in the Soninke villages appear to be much more involved in the irrigated perimeters than are Toucouleur women; this involvement is not surprising given the long cultural history of women's agricultural work in the Soninke group, as well as the history of collective organization. Women were involved in most cases from the beginning of the perimeters, and in some cases appeared to have demonstrated how successful rice farming could be to men, who were less used to rice farming traditionally than women. This influence alone -- strong women farmers who knew how to grow rice, and were given the chance to begin irrigation with this

crop -- may be an important factor in the greater success the Soninke villages have had with their perimeters, compared to the Toucouleur.

Despite women's inclusion in the projects from the beginning, and their inclusion in leadership positions in work groups that direct work organization, etc., it is apparent that there have been inequities in women's participation in the Soninke groups with whom we spoke. First, women were not in the key decision positions in the irrigation leadership; to the extent that key decisions fail to consider women's particular work requirements, responsibilities, or desires, this remains a problem for Soninke women: the case of Mouderi III, where women will have their own perimeter should be interesting to observe from this perspective.

Women's work in many examples mentioned above appeared to be overextended between irrigated fields for the family (with husbands in control of resources) and traditional agricultural work that had to be fit onto their household/child care responsibilities. In several cases, women appeared to be continuing with their traditional fields because this was one way to gain money for their own needs; in other cases, such as Ballou I and Mouderi III (the yet unformed women's perimeter), women were requesting and gaining their own irrigated parcels where they would be able to keep profits for their needs and have direct control over necessary resources such as water and fertilizer. In these latter cases, one might expect that women will be even more overburdened, or that traditional hivernage fields will decrease in favor of the more profitable irrigated fields. If these cases are successful for women, if they have the training and organizational skills to direct successful projects, we may also expect that other women in other villages will ask for separate perimeters in the near future.

In summary, the Soninke women were more involved in the irrigated scheme than the Toucouleur women and their added labor in family farms may well have helped to make the Soninke perimeters successful and relatively self-sustaining, compared to the perimeters in Toucouleur villages. Despite this important point, the Soninke women were contributing their labor to the family, with little personal benefit from their labor on the fields. Although benefits to the family were high in these cases, probably, the Soninke women appeared to need to have additional cultivation opportunities that would allow them to gain money for their personal responsibilities; because of this, they overburdened their own time with irrigated parcels for the family, all traditional economic activities, and the required, never ending household labor.