Hired Herders and Herd Management in Fulani Pastoralism (Northern Côte d'Ivoire)
Monsieur Thomas J. Bassett

Résumé
T. Bassett — Bergers salariés et gestion du troupeau chez les éleveurs peuls du Nord de la Côte-d'Ivoire.
Les bergers salariés occupent une place importante dans l'élevage de Côte-d'Ivoire. Ceci apparaît à la fois dans le fort pourcentage de bergers employés par les propriétaires de bétail mais également dans le rôle que jouent ceux-ci en matière d'amélioration des conditions de pâturage. La réussite de l'élevage dépend de la mobilité des troupeaux et de la capacité de ces derniers à utiliser des ressources distribuées de façon inégale dans le temps et dans l'espace. Ce travail tente de montrer que la capacité d'adaptation des Peuls aux variables de l'environnement est déterminée par les rapports de production qu'ils entretiennent avec les bergers salariés, pour lesquels les conflits de classes, les conditions de travail précaires et les salaires relativement bas sont à l'origine d'un fort ressentiment. La résistance des bergers à ces conditions de travail conduit finalement à freiner la mobilité des troupeaux. L'auteur privilégie une approche de type écologico-politique pour poser le problème de la gestion du troupeau au confluent des politiques de production et de l'écologie agro-pastorale. C'est en se situant à ce point de jonction que l'on peut expliquer pourquoi les conditions optimales de pâturage, telles que définies dans le modèle de gestion marginale des ressources, ne sont pas remplies dans le Nord de la Côte-d'Ivoire. Ces résultats soulignent la nécessité de replacer le concept de « politique de production » dans les modèles d'élevage du bétail.

Citer ce document / Cite this document :
http://www.persee.fr/doc/cea_0008-0055_1994_num_34_133_2045

Document généré le 02/06/2016
Thomas J. Bassett

Hired Herders and Herd Management in Fulani Pastoralism (Northern Côte d’Ivoire)

Recent studies on African pastoral economies suggest that hired herders are playing an increasingly important role in livestock raising. Little (1992: 138-140) notes that wealthy farmers and absentee herd owners in the Lake Baringo District of Kenya commonly employ salaried herders to manage their cattle. In the Middle Belt of Nigeria, Blench (1985) shows that Fulani pastoralists with large herds and insufficient labor supplies employ wage workers to guard their cattle. In other parts of West Africa, the widespread employment of salaried herders appears to be recent and linked to processes of commercialization and social differentiation among livestock owners.1 Cattle-poor households caught in cycles of decapitalization are forced to seek work as hired herders to rebuild their herds and to meet basic subsistence needs (White 1984). From the Maasina region of Mali to central Niger, impoverished Fulani pastoralists are increasingly guarding animals belonging to other households (Bonfiglioli 1985: 31-34; Turner 1992: 257-266).

Despite the important presence of hired herders in African pastoralism, very little is known about them and how their employment influences herd management. There are at least two compelling reasons why we should fill this gap in our knowledge. First, classical models of livestock production show that imbalances between labor supplies and livestock holdings are common among pastoral households (Dupire 1962: 135-140; Stenning 1959: 103). Stock-rich but labor-poor households have historically entered into a number of institutionalized exchanges of cattle to mobilize extra-household labor.

1. This is not to say that the hiring of non-household labor by the Fulani is a recent phenomenon. QUÉANT and ROUVILLE (1969: 174, 187) note that among the Fulani of Barani, Burkina Faso, 40 % of households employed salaried herders. Hired herders worked either for wealthy herd owners who wished to relieve their children of herding responsibilities, or for households who lacked active workers and whose household head was too old to guard cattle. The authors note, however, that outside of Barani, the proportion of herds guarded by household members was much higher.

Cattle entrusting is one such arrangement in which the surplus stock of one household is cared for by a stock-deficient but labor-rich household, usually in exchange for the right to consume milk and an occasional animal. Such reciprocal livestock-labor exchanges often entail long-term commitments and obligations that encourage herders to devote care to their work. As pastoral production relations become increasingly monetized, does the nature of this commitment and the quality of herding change (Sperling & Galaty 1990: 82-90; Sikana & Kerven 1991: 19)?

A second reason why we should examine the relationship between hired herders and herd management is because of its relevance to current discussions on indigenous environmental knowledge and resource management. The literature on pastoral land use has become increasingly sophisticated on the adaptive strategies of herders to changing range conditions. The image emerging from this literature is of flexible pastoralists whose decision making is finely tuned to environmental variability (Behnke & Scoones 1993; Homewood & Rogers 1987; McCabe 1990; Niamir 1991). Our knowledge of the ecological determinants of herd movements has increased but we know very little about how the mobilization of labor makes the “opportunistic” management of herds possible. The questions thus arise, how are grazing strategies affected by the employment of salaried herders? Is their performance conditioned by the fact that the animals they are managing belong to someone else?

Some recent studies on cattle entrusting suggest that there is a relationship between cattle ownership and herding practices. For example, incentives for diligent herding are believed to vary with the number of self-owned cattle in a herd. As Bonfiglioli (1985: 35) and Bovin (1990: 50) argue, as the number of animals owned by the herder declines, the greater the incidence of careless herding, range degradation, and reduced livestock productivity. Conversely, it is assumed that as the number of self-owned animals in a herd increases, the incentives for better management of livestock and range resources increase. Turner (1992: 267-269) questions this “ownership-incentive linkage” in the case of cattle entrustment in Maasina. He argues that the reason herders with few self-owned cattle may be less assiduous about livestock raising is not due to a lack of incentives but rather to labor shortages within the household. Such a link is also called into question by Little (1985a) who suggests that reduced herd mobility and land degradation result from the desire of absentee herd owners to keep their animals close to markets—not to herder disincentives. Consequently, rather than send their cattle on transhumance when range conditions deteriorate, these “part-time” pastoralists keep their herds at the outskirts of towns where overgrazing and soil erosion have become serious problems.

This case study seeks to contribute to this discussion by examining herding practices as the outcome of political-ecological processes. The political ecological approach encourages one to examine herd management at the intersection of the politics of production and agro-pastoral ecology. Rather
than reduce herder behavior to ownership of animals within a herd. I argue that power struggles between herders and owners over the quality and control of labor adversely affect herding practices. Given their poor working conditions, low incomes, and weak commitment to herd owners, most herders do not devote much care to their work. The most dramatic manifestation of careless herding is the widespread problem of crop damage. Farmer-herder conflicts over this issue have led, on more than one occasion, to the expulsion of Fulani herds from favored transhumance zones. Such restrictions on herd movements indicate that the Fulani’s ability to take advantage of changing range conditions is constrained by their productive relations with salaried herders. In the end, this paper argues that it is at the juncture of environmental and social processes that one can begin to explain why optimal grazing strategies as delineated in models of opportunistic management are not being realized in northern Côte d’Ivoire.

The theoretical foundations of this approach draw on both political economic and ecological theory. In particular, the work of Burawoy (1985) and Watts (1993) on the politics of production provides insights into the areas of labor control between cattle owners and hired herders. I argue that changes in the social organization of work (the labor process) result in a particular form of production politics (struggles over the labor process) that affects the quality of work. In the case of Fulani pastoralism, changes in Sudano-Sahelian economies dating from the colonial period have had far-reaching effects on productive relationships, notably the way in which labor is mobilized and compensated. The transition is from a dependence on family and servile labor and inter-familial labor-livestock exchanges to the recruitment of herders in local labor markets on a contractual basis. This shift from family and quasi-familial labor to salaried workers represents a fundamental change in the nature of pastoral production relations (Sikana & Kerven 1991: 26). Of most interest to this study is the decline in long-term commitments and obligations linking the families of herders and herd owners and the concomitant increase in short-term commitments that terminate with the labor contract. The implications of these new productive relationships on herder performance is the major focus of this paper.

For theoretical insights into the ecology of herd movements, I draw on the work of Sandford (1983) and Behnke and Scoones (1993) whose focus on livestock management in non-equilibrium environments offers insights into the dynamics of herd mobility and the opportunistic grazing strategies among the Fulani. Sandford (1983: 38-39) describes two contrasting herd management approaches to fluctuating grazing conditions, which he calls “conservative” and “opportunistic” strategies. A conservative grazing strategy is one in which stocking rates are constant and usually set low to prevent range degradation in low-rainfall years. An opportunistic strategy seeks to take advantage of fluctuating range conditions by adjusting the number of animals to forage supplies. Behnke and Scoones (1993: 15) describe an opportunistic strategy as essentially “responding to alternate
periods of high and low (range) productivity, with an emphasis on exploiting environmental heterogeneity rather than attempting to manipulate the environment to maximize stability and uniformity. Herd fission, frequent cattle movements, and long-distance transhumance are just a few of the herding practices that characterize the Fulani's style of opportunistic management.

The following case study is divided into two parts. The first provides an overview of Fulani livestock raising in northern Côte d'Ivoire. The second presents a portrait of hired herdsmen with details on their working conditions and relations with herd owners. It is in this section that I show how struggles over the labor process have an adverse impact on herding practices. In the conclusion, I tie together the conceptual strands of my argument and underscore the need to integrate some notion of production politics into our models of livestock management.

Interviews with thirty salaried herdsmen in the dry season of 1992 provided information on their recruitment and remuneration, their relations with herd owners and local communities, and their working conditions. Twenty interviews took place in the Katiali region and ten in the vicinity of Sirasso (Map 1). Meetings typically took place near pastoral dams where herdsmen had the leisure to discuss their work. Interviews were also conducted with herd owners and livestock development officials to gain their perspective on the role of salaried herdsmen in pastoral production. This recent field research builds upon my earlier studies on Fulani pastoralism and peasant-herder conflicts in northern Côte d'Ivoire (see Bassett 1986, 1988, 1993).

Fulani Livestock Raising

Fulani livestock raising in Côte d'Ivoire is relatively recent. More than two thirds of the current herd owners entered the country after 1969 from the neighboring countries of Mali and Burkina Faso. This influx of Fulani herds is related to the transformation of Sudano-Sahelian economies over the past hundred years. The two most important catalysts behind this immigration are the end of slavery during the colonial period and the 1969-1973 Sahelian drought. French colonization ended the slave-based system of agro-pastoralism that characterized Fulani production systems earlier in this century. In the Maasina and Seno areas of Mali and Burkina, Fulani slaves (maccube) worked in their masters' fields, dug wells, wove cloth, paid taxes, and marketed livestock (Turner 1992: 18-24; Quéant & Rouville 1969: 148-150). As slaves and their descendants (rimaibe) gradually gained their independence, the Fulani became more dependent on family and inter-familial labor for their survival. Some households began to rely more heavily

---

2. The Maasina refers to the western third of the inland Niger delta floodplain (Mali) while the Seno ("the sandy place") refers to the Barani region of northwestern Burkina (Turner 1992: 10-15; Quéant & Rouville 1969: 138).
Map 1. Source area of transhumant hired herders employed in the Korhogo region of northern Côte d'Ivoire.
on livestock production and succeeded in increasing the size of their herds aided by colonial veterinary interventions. For these pastoral households, cattle were most often guarded by the sons of herd owners or entrusted to other families for standardized payments. Cattle entrusting was far more common than salaried herding which the Fulani perceive to be degrading work (Quéant & Rouville 1969: 187; Grayzel 1990: 45). Other Fulani devoted their resources to agriculture and became more sedentary. Rimaaibe households, for their part, gained control over land as well as over their labor and greatly expanded both their farming and livestock operations. As livestock numbers increased in the 1950s and 1960s, pressure on range resources compelled some large-scale herd owners to migrate southwards in search of better pasture. It is these wealthy Fulani who ultimately entered Côte d'Ivoire in the late 1960s and early 1970s (Figure).


3. According to Quéant and Rouville (1969: 185-186), the size of the entrusted herd determined whether payments were in cash or in kind. For larger herds, the herder of entrusted cattle received a two-year-old male after six months, and a two-year-old female after twelve.

4. Kientz (1991) estimates the annual growth rate of Fulani cattle to be 9% over the period 1968-89. About half of this growth is due to natural increase. The remainder is linked to immigration.
A major impetus for the southerly migration of Fulani herds was the 1969-73 Sahelian drought. This factor combined with attractive conditions in Côte d’Ivoire (better pastures, higher cattle prices, no livestock taxes, and free veterinary services) were major stimuli to this southerly descent (Gallais 1979). The devastating impact of the Sudano-Sahelian drought on agro-pastoral households has been well documented (Watts 1987). The combination of animal deaths and high grain prices forced especially poor households to sell livestock at depressed market prices. More wealthy Fulani and non-Fulani (rimaaiibe, merchants, government officials) took advantage of these terms of trade and succeeded in building up their own herds. The end result was a major redistribution of cattle and heightened economic differentiation. In order to meet their basic subsistence needs and rebuild their herds, livestock-poor households were forced to engage in cattle entrusting or to seek wage work outside their communities (Turner 1992: 145). That many pursued the latter alternative is evidenced by the strong presence of salaried herders in Côte d’Ivoire.

Bernardet (1984) provides the most comprehensive account of Fulani livestock raising in Côte d’Ivoire. This semi-sedentary herding system combines agriculture and seasonal transhumance. The Fulani practice an intensive form of agriculture in which crops (principally maize) are cultivated on the former sites of cattle corrals where soil fertility is improved by animal manure. During the rainy season, herds graze in the vicinity of herd owner camps. Over the course of the six-month long dry season, many herds go on transhumance to the southern fringes of the savanna region (Map 2). Most herd owners live in rural areas and are actively involved in livestock management. They visit their cattle regularly and normally supervise the movement of herds from one grazing area to another. A growing number of large-scale herd owners live in urban areas (e.g. Korhogo) and travel to the countryside to visit their herds.\footnote{Interview with J. B. Defaye, SODEPRA, Korhogo, 9 March 1992.} The features of Fulani livestock raising that are most relevant to this study are: large average herd sizes; frequent herd movements; a dependence on salaried herders; and bitter conflicts with local farmers over the problem of crop damage.

Herd Size and Divisions

As observed in other Fulani groups in the sub-humid zone of West Africa, Fulani herds in Côte d’Ivoire are remarkable for their size. In contrast to the Sudano-Sahelian regions where families own between 10-50 head (Dupire 1962: 128; ILCA 1979; Benoit 1977), the average holding for the sub-humid zones is between 150-180 head.\footnote{Bernardet 1984; Blench 1985, Bassett 1993. These averages mask, however, significant differences in cattle holdings among households. For example, in the Ferlo region of northeastern Senegal, Sutter (1987) shows that the poorest Fulani households held an average of 3-15 cattle in contrast to the wealthiest households which possessed an average of 143 head. Turner’s data (1992: 168-176) for the Maasina region of Mali similarly shows considerable inequality in cattle ownership among households.} In the Katiali region, the average
MAP 2. Seasonal transhumance routes of Fulani cattle in Côte d'Ivoire.
holding among forty-two Fulani herd owners in 1990 was 180 head. The smallest herd contained 41 cattle while the largest numbered an impressive 1090 head. The relevance of these numbers is that they indicate the large size of herds and the concomitant need for a large pastoral labor force (Swift 1986).

Depending on the number of animals owned by a household, herds are usually divided into smaller management units. It is common to split herds larger than 100 head into two unequal parts: a “milk herd” and a “bush herd”. The milk herd is corralled near the herd owner’s camp or village to provide his family with fresh milk for consumption and sale. It is usually composed of no more than twenty lactating cows. The remaining cattle are grouped into a second herd (the bush herd) and guarded at a distance from the camp. Cows are moved between these herds as their milking potential and family needs change. The size of both herds varies with the total number of cattle owned by a family.

Large bush herds usually undergo a second division at the beginning of the dry season. Herd fission in this period is motivated by two management concerns: to exploit range resources more efficiently and to reduce the risks of crop damage. The average herd size in this period is between 70-85 head. Each herd is guarded by an individual herder who leads cattle to different and more distant pastures as the dry season progresses. These individual herds are regrouped at the beginning of the rainy season to form one large bush herd. This fusion of herds usually takes place in the vicinity of the herd owner’s camp. However, if his camp is surrounded by farmer’s fields or his cattle are prevented from using pastoral infrastructure (dams, dipping tanks, improved pasture), then this regrouping will take place at another location.7

Herd Mobility

The spatial and temporal variation in rainfall, disease, and pasture conditions puts a premium on flexible responses to changing range conditions. The Fulani’s principal adjustment to the environmental heterogeneity and disease hazards of northern Côte d’Ivoire is frequent herd movement. Movements are both regular and contingent as herds are moved in response to both predictable and unpredictable events (Bassett 1986).

During the early rainy season months of June and July, grazing conditions are ideal. The quantity and quality of water and pasture are excellent, allowing animals to graze within a short radius (4-5 km) of their night corrals. Herds are usually kept close to the camp of their owners who visit their animals twice or three times a week. These visits are to ensure that animals are being de-ticked by herders and that cattle are at a safe distance from cropland.

Range conditions begin to deteriorate during the last three months of the rainy season (August-October). The location of night corrals shifts frequently as herders lead cattle to better pastures and away from tse-tse fly infested areas. Beginning in August, grasses become increasingly less palatable due to lignification. Herd owners search for new grazing locations, especially fallow fields where the highly palatable *Andropogon guyanus* is found. They direct hired herders to these new grazing areas and advise them to avoid the major river basins where parasitic diseases are prevalent (Petit 1980). As the rains slack off in October, savanna fires lit by herders, hunters, and farmers, force herds to move to unburned areas. In November and December, the first two months of the dry season, the frequency of herd movements increases as pasture and water problems become more acute. Herd owners direct their herders to graze the stubble of harvested fields and to move into burned-over areas where residual soil moisture has encouraged plant regrowth. This is also the period when large bush herds are split into smaller herds and when nocturnal grazing becomes common. As noted below, November and December are the peak months of crop damage in the Katiali region when cattle stray into farmers' fields.

Beginning in December and into January, herd owners direct their sons and salaried herders to head south on a transhumance trek that will last 3-4 months on average. The principal transhumant routes are illustrated in Map 2. One of the most favored areas is the region between Dikodougou and Mankono—100-200 km south of Katiali. In May the herds return to their rainy season ranges and the herd movement cycle begins anew.

In contrast to the rainy season when herd owners visit their herds twice or three times a week, dry season visits decline to three to four times a month. Part of the problem is distance. It takes more time to travel on motorbikes to the transhumance zones south of Korhogo. When owners do make the trip, they tend to stay in nearby towns for a few days to make arrangements until their next visit. Hired herders tend to assume more responsibility over herd management during this period. They frequently switch grazing areas and visiting owners sometimes have trouble locating their animals. To keep a close watch on their cattle from a distance, herd owners rely upon trusted herders or send a son to participate in the transhumance. Alternatively, a relative of the owner will move to a town in the transhumance zone for three to four months to keep an eye on the family herd. When an animal is reported lost, the herd owner will make a special trip to supervise its search.

---


9. Herd owners often tell hired herders to take cattle to wherever there is good pasture and water. Interviews with M. Sangaré, Katiali, 11 February 1982 and S. Sidibé, Katiali, 10 February 1982.
In summary, the frequent movement of herds to take advantage of changing range conditions is a fundamental feature of Fulani herd management in Côte d’Ivoire. It is a good example of an opportunistic grazing strategy—"the object of which is to seize opportunities and to evade hazards as far as possible" (Westoby, Walker & Noy-Meir 1989). Typically, herd owners direct herders to move cattle as pasture, water, animal diseases, and/or conflicts with farmers fluctuate. Herd mobility is critical during the rainy and dry seasons, not just between seasons.

Opportunistic grazing is a labor intensive herding strategy. In addition to frequent herd movements, the practice of dividing large herds into smaller grazing units requires a large labor force (Swift 1986; Behnke & Scoones 1993). The fact that these small herds are still quite large means that herders are faced with a number of time-consuming tasks. This is especially the case when cattle are moved into agricultural zones to graze in fallow fields (August) or in recently harvested fields (November-December). Herders must be particularly vigilant during these periods to avoid crop damage. The tasks of de-ticking animals, building and rebuilding night corrals, and nocturnal grazing means that herders are literally working day and night. In the absence of sufficient household labor, hired herders play a central role in implementing this labor intensive herding strategy.

Salaried Herders

There are three main categories of salaried herders in northern Côte d’Ivoire: transhumant hired herders, sedentary hired herders, and market herd trekkers. The first group, the subject of this paper, is composed of migrant workers who are contracted by Fulani herd owners to work for a minimum period of six months. The cattle are typically large, hump-backed animals (*Bos indicus*) that are susceptible to trypanosomiasis. As a result of their involvement with transhumance, we can label this first group of hired herders as "transhumant hired herders". The second group, "sedentary hired herders", are distinguished by their relative lack of mobility. They are typically hired by a group of cattle-owning farmers who pool their animals into a common herd. The animals are usually the small N’Dama or Baoulé stock (*Bos taurus*) that are resistant to sleeping sickness. This herd is usually coralled at the outskirts of a village and grazes within a 2 to 5 km grazing radius. Sedentary herders return to the village each evening where they pass the night. They do not engage in transhumance. Sedentary herders are paid 75-100 CFAFr/animal, and also have the right to sell the milk of lactating cows. They typically manage the same herd for many years, in contrast to transhumant hired herders who work for less than one year with the same herd owner. The third type of hired herder, the "market herd trekker", is employed by cattle traders to lead a herd to market.
I estimate that salaried herders account for two-thirds of the transhumant pastoral labor force in northern Côte d'Ivoire. In the Sirasso region, Defaye conducted a census of twenty Fulani settlements in which he found that 73% of the herders were salaried.¹⁰ In a more detailed study conducted in the Niellé region, Bernardet (1984: 98-101) notes that the importance of hired herders varies with the size of herds and by season. For example, for households owning more than 250 head, 90% of herders are salaried. For agro-pastoral households owning less than 250 cattle, the number of salaried herders varies between seasons. They are proportionately more numerous during the rainy season when household members are engaged in agriculture and deticking animals requires a considerable amount of labor. Thus, for households owning between 100-250 head, hired herders accounted for 57% of the pastoral labor force during the rainy season but just 40% during the dry season when household members assume more herding responsibilities. For households owning less than 100 cattle, half of the rainy season herders were salaried while during the dry season they represented just one-third of the workforce. In general, the owners of large herds rely heavily upon salaried herders while small-scale herd owners depend on family labor.¹¹

Crop Damage

Data on crop damage were collected over an eleven-year period based on interviews with Senufo and Jula farmers in the village of Katiali. A randomly selected sample of 38 households was asked to indicate the crop damaged, the month and time of day it took place; the type of animal responsible, and the extent to which farmers received some compensation for the damages. The table summarizes the results of this longitudinal survey. These data show that more than three-quarters of the crop damage occurred in long-cycle crops, with cotton and swamp rice accounting for two-thirds of the total. More than two-thirds of the incidents took place during the months of November and December. Half of the damage occurred at night and 48% during the day. In 10% of the cases, farmers were not sure when the damage occurred. Fulani-owned zebu cattle were responsible for 83% of the incidents, farmer-owned cattle for 8%, while the type of cattle in 9% of the cases was unknown. The rate of remuneration was abysmally poor—in almost three-quarters of the cases, farmers received no compensation. The issue of unpaid damages is the single most important reason behind farmer-herder conflicts in the region (Bassett 1988).

¹⁰ J. B. Defaye, “Campements des transhumants de Sirasso. Tableau comparatif des bouviers salariés aux bouviers non-salariés”, 1992, ms. In Defaye’s study, there were 176 herders of which 128 were transhumant hired herders.

¹¹ Two cases were encountered in Katiali where sedentary hired herders employed transhumant herders to guard their personal animals. I. Bolly has been working as a sedentary herder for 18 years and now has a personal herd of 120 head. Over an eleven year period, M. Diallo has formed a personal herd of 30 head. While they work as sedentary herders for cattle owning farmers in Katiali, they both employ transhumant herders.
## Crop Damage Incidents in Katiali, Côte d'Ivoire*

<table>
<thead>
<tr>
<th>Year</th>
<th>1981-82</th>
<th>1985</th>
<th>1987</th>
<th>1991</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>Crop</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cotton</td>
<td>18</td>
<td>25</td>
<td>21</td>
<td>50</td>
<td>26</td>
</tr>
<tr>
<td>Wet rice</td>
<td>32</td>
<td>44</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Upland rice</td>
<td>3</td>
<td>4</td>
<td>9</td>
<td>21</td>
<td>6</td>
</tr>
<tr>
<td>Maize</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>17</td>
<td>3</td>
</tr>
<tr>
<td>Millet</td>
<td>10</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Sorghum</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Peanuts</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>Month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>July</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>August</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>September</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>October</td>
<td>6</td>
<td>8</td>
<td>7</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>November</td>
<td>22</td>
<td>30</td>
<td>11</td>
<td>31</td>
<td>24</td>
</tr>
<tr>
<td>December</td>
<td>34</td>
<td>47</td>
<td>6</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Time of day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day</td>
<td>18</td>
<td>25</td>
<td>11</td>
<td>31</td>
<td>27</td>
</tr>
<tr>
<td>Night</td>
<td>42</td>
<td>58</td>
<td>24</td>
<td>67</td>
<td>17</td>
</tr>
<tr>
<td>Day &amp; Night</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Unknown</td>
<td>13</td>
<td>18</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Animal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zebu</td>
<td>55</td>
<td>75</td>
<td>34</td>
<td>94</td>
<td>36</td>
</tr>
<tr>
<td>Taurin</td>
<td>9</td>
<td>12</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Unknown</td>
<td>9</td>
<td>12</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Compensation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>68</td>
<td>93</td>
<td>28</td>
<td>80</td>
<td>21</td>
</tr>
</tbody>
</table>


If the crop damage data for the Katiali region are representative of the Sudanian savanna zone, they do not reflect the situation in the more humid Guinea savanna south of Korhogo where yams are the dominant crop. The growing season for yams is much longer than for the sudanian crops. Whereas all crops are harvested by the end of December in the Katiali area, yams are not harvested in the Sirassao region until early February. Moreover, yams are planted in early March, a full two to three months before
Sudanian crops are in the ground. Consequently, in contrast to the Sudanian zone where crop damage is not a problem for most of the dry season, it occurs during every month of the year in the Guinea zone. As shown in Map 2, north-south transhumance routes cut across this area. Not surprisingly, the southern savanna is the locale of the greatest tensions between Senufo farmers and Fulani herders.

The temporal and spatial pattern of crop damage in the Katiali region is closely linked to the periodization of herd movements. First, the frequency of incidents is highest during the first two months of the dry season. It is precisely at this time in the pastoral calendar when herd mobility increases. As range conditions deteriorate, Fulani cattle move about in search of water and pasture. Water is most often found in bottomlands where farmers are still cultivating swamp rice. The spatial pattern of crop damage incidents shows that fields adjacent to bottom lands are most often damaged (Map 3). This is the case for cotton, millet and sorghum fields. Second, November and December are also the months when herd fission takes place and when animals begin to graze longer hours well into the night. It is also at this time that herd owners instruct herders to graze cattle on the stubble of recently harvested fields. Third, this period also marks the beginning of the inter-seasonal transhumance trek that involves the large-scale cattle movements between the northern and southern savannas. Not all herds go on transhumance, and those that do leave are replaced by transhumant herds from neighboring Mali and Burkina. This regular north-south displacement of herds increases the chance of crop damage as cattle move through areas where crops are still standing.

Although agro-ecological and pastoral constraints play an important role in the genesis of crop damage, they are not the only variables at work. Hired herders mentioned a number of work-related and social factors that contribute to crop damage. When asked about why there is so much crop damage, herders gave a number of responses. Many said the main problem is that herds are too large for them to control effectively. SODEPRA recommends one herder for every fifty head of cattle. But, as already indicated, the average number of animals guarded by salaried herders is closer to seventy. Herders repeatedly noted the difficulty of managing large herds by themselves. Some of them expressed a feeling of helplessness over the problem of stray cattle. They stated that cattle will wander into a field independent of a herder simply because they are hungry.12

One herder admitted that crop damage occurs because herders are unfamiliar with the location of fields in the territory through which they are moving. Suddenly they find their herd in someone’s field. The herder flees because he fears the wrath of the farmer and/or herd owner. Some herders

---

12 Night corrals are often poorly constructed. Herders stack cut branches in a circular form which any determined animal can break out of to graze in a neighboring field. It is not until the next day that a herder or farmer discovers the crop damage.
fear they will be forced to pay for the damages themselves or lose their job if they repeatedly cause crop damage. Such penalties are obvious incentives for herders to flee a crop damage site rather than own up to their culpability. The fact that their job is temporary, and that in the long run they have little stake in maintaining friendly ties with farming communities also influences their decision to flee.
Hired Herders and Herd Management

To examine more closely how the employment of salaried herders affects herding practices, this part focuses on the working conditions of hired herders and their relationships with herd owners. It shows that tensions between owners and herders over the quality and control of herding undermine opportunistic grazing strategies. I argue that these struggles over the labor process are linked to the precarious nature of transhumant herding and to the resistance of herders to their exploitation by herd owners as poorly paid wage laborers. It begins with a portrait of the “typical” hired herder. This is followed by a detailed look at the difficult and hazardous working conditions of herders. In the last section, I show how power struggles between herd owners and hired herders over the labor process are expressed in careless herding and other forms of resistance.

Kalo Woro: A Profile of Hired Herders

The results of the transhumant herder survey produce a portrait of the “typical” hired herder in northern Côte d’Ivoire. This person is a young, unmarried male from Mali who works for a contracted period of six months and earns an average salary of 10,000 CFAFr/month. Nearly three-quarters (73%) of the herders originate from the Segu-San-Mopti region of Mali. On average, a herder watches over 68 head of cattle. About three-quarters (73%) of the herd owners reside in Côte d’Ivoire with the remainder living in Mali. When asked what they planned to do with the money earned, 40% stated they planned to buy cattle; 25% said they planned to give the money to their “elder”; and the rest mentioned a variety of income earning objectives.

Transhumant hired herders hold the distinctive job title of kalo woro in local labor markets. This term, which in Dyula means six months, refers to the duration of the basic contract period. Herd owners and unemployed herders usually cross paths on market days in towns where Fulani tend to concentrate (e.g., M’Bengué, Niofoun, Tengréla, Sirasso). When discussing employment with a prospective employer, herders consider the most important question to be monthly salary and benefits. The number of animals to be guarded is secondary. The salary is negotiated and is paid either monthly or after the six month period—whichever is agreed upon. In addition to salary, herders typically receive a suit of clothes (including shoes, hat, and raincoat), flashlight and batteries, a water container, and food. The food stipend, either in cash or in kind, is distributed periodically during owner visits to the herd.

13. The average age of herders is 26.4 years (median: 25 years). Three-quarters (76%) are single and 97% immigrated from Mali. The average period of employment with the present herd owner was nine months (median: 5 months), with the range being from 1 month to 3 years. Salaries range from 7,000 CFAFr to 13,000 CFAFr. In 1992, 10,000 CFAFr amounted to $35.00.
Bernardet (1988: 118-120) argues that in comparison to sedentary hired herders, transhumant hired herders are not as well remunerated for their labor. He calculates that sedentary herders earn about the same base salary per month as transhumant herders.\textsuperscript{14} In addition, sedentary herders’ access to milk allows them to increase their incomes significantly. He estimates that revenues from milk sales (4-5 liters/day at 100 CFAFr/liter) amounts to 150,000-160,000 CFAFr/year. This additional revenue virtually doubles the income of sedentary herders which enables them to purchase animals. Indeed four out of five sedentary herders in Katiali were successfully building their own herds. Two of them had accumulated enough cattle (43 and 120 head) over the past 10-15 years that they have hired transhumant herders to guard them!

Of the transhumant herders seeking to rebuild herds, the majority preferred to be paid in cash at the end of their contract. When asked why they preferred to receive cash rather than an animal every six months, herders mentioned practical problems such as trekking 1-2 animals back to the San-Segu-Mopti region and personal security. They also noted that they could rebuild herds more quickly with cash versus animal payments because cattle can be purchased more cheaply in Mali. More than a third of the herders had no intention of buying cattle. Their objectives varied considerably: to buy oxen for farming; purchase food; obtain a truck driver’s licence, pay bride price, buy clothes and cigarettes, and obtain transport money to return home.

The diversity of income earning objectives raises questions about the personal background of hired herders. I have already suggested that it is the members of relatively poor households that seek such employment. However, whether the income earned will actually be invested in family herds back in Mali depends on the relationship between herders and their families. Both Bernardet (1988: 173-174) and Turner (1992: 198) suggest that a preponderant share of the herders who end up in Côte d’Ivoire are outcasts in their communities. They have typically been accused of stealing cattle by the family patriarch and leave their communities in disgrace. Under such circumstances, it is unlikely that remittances will be invested in reconstituting family herds.

\textsuperscript{14} According to his figures, transhumant herders earn between 10,000-12,000 CFAFr/month while sedentary herders earn 100 CFAFr/head with an average herd size of 122 animals. I calculated the same average salary for transhumant herders. However, I estimate that sedentary herder’s base salary is lower than what Bernardet suggests. He simply multiplies the number of cattle in a herd by the rate of remuneration per animal. In Katiali, sedentary herders are not paid for guarding calves in a herd. Calves comprise between 20-45% of the animals in a herd which would result in a much lower monthly income. Second, not all herders receive food from herd owners. Two out of five sedentary herders did not receive food in Katiali.
Working Conditions

Working conditions of hired herders are extremely difficult. Herders complain that there is never a moment's rest. They are behind a herd all day and when an animal strays from the camp at night, they must go and search for it. The daily routine of a herder requires great endurance and is often dangerous. He has just two meals: breakfast and dinner. After a breakfast of couscous and milk, the herder takes the cattle out to graze in a radius of 5 to 10 km from the camp. Walking all day under the hot sun or pouring rain, herders do not get a rest until 3 or 4 in the afternoon when animals stop to drink. Although some larger herds (150 head) are guarded by two persons, most herders work alone. As a result, a herder is unable to visit nearby villages unless a friend agrees to watch his herd. Depending on the time of year, there are especially demanding tasks to perform each day. During the rainy season, de-ticking animals is the most onerous job. During the dry season, when pasture quality dramatically declines, herders must lop tree branches to provide cattle with palatable browse. The dangers of climbing trees and snake bite were mentioned as common hazards. However, the most frequently cited occupational hazard was being attacked by peasant farmers enraged over crop damage. In summary, prolonged exposure to the elements, long working hours, hunger, loneliness, and life threatening hazards were cited as common features of the daily work routine of transhumant hired herders.

When asked if it was more or less difficult to herd cattle in Côte d'Ivoire in comparison to Mali, hired herders uniformly responded that it is much harder in Côte d'Ivoire. Two reasons were commonly cited. First, herders noted that it is much more difficult to detect a stray animal in the savanna woodlands of northern Côte d'Ivoire in comparison to the open spaces of the Sudano-Sahelian zone. Second, herders exclaimed that tensions between herders and farmers are far more intense in Côte d'Ivoire than in Mali. Even herders who never had run in with farmer mentioned conflicts with local farmers as a major occupational hazard. In the Sirasso area interviews, herders reported recent attacks in the vicinity of Sakpélé that resulted in seven animal deaths, dispersed herds, beatings, and even torture. In one incident, five herders were run down by a group of farmers and had their clothes removed. While they were held down, their attackers took the poisonous fruit of a climbing plant (*Mucuna pruriens, alt. Stizolobium deeringia-num*) and rubbed it all over their exposed skin. According to N. Sidibé, intense itching ensues for the next 24 hours that drives victims to scratch themselves madly.

Herders fear that more violent acts might occur at any moment. Indeed, in 1980-81 and again in 1985-86, scores of Fulani men, women and children

15. *In Senufo: bóloza; in Fulfulde: kurignégné.*
died during sporadic clashes throughout the Korhogo region (Bassett 1988). In between these eruptions, tensions smoulder and occasionally flare up, ending in Fulani deaths. Other forms of farmer resistance to Fulani pastoralism are: 1) poisoning of water points; 16 2) blocking the return of transhumant herds towards the beginning of the rainy season; 17 3) refusing to allow pastoralists to settle in an area; 18 4) destroying cattle corrals; 19 and 5) sabotaging pastoral dams. 20 The major reason for this sustained resistance is the recurring problem of uncompensated crop damage.

Given these very precarious working conditions, why is it then that herd- ers flock to Côte d'Ivoire in search of employment? There are at least four reasons. First, as already noted, the Fulani perceive wage labor as degrading work. If they must engage in it, they prefer to leave their communities and seek employment in another region. Second, the alternative of staying put and forming a cattle entrusting relationship with a wealthy herd owner may be an effective subsistence strategy but is unlikely to allow stock-poor herd-ers to increase the size of their herds (Turner 1992: 210-215). Third, herder salaries are twice as high in Côte d'Ivoire as in Mali. 21 Typically, the average hired herder earns between 4-5,000 CFAFr/month in Mali. The mean salary in Côte d'Ivoire is 10,000 CFAFr, or double what one can earn across the border. 22 Herders declared that salaries are higher in Côte d'Ivoire because the work is much harder and more hazardous. 23 A fourth reason that immigrant herd- ers flock to Côte d'Ivoire is that they either lack information about the hazardous nature of the work or they are adventurous and willing to withstand the hardships. It is likely that a combination of some or all of these factors influence the decision to migrate.

Relations with Herd Owners

In hiring a herder, the issues of trust, commitment, and careful herding loom large for herd owners. A large percentage of hired herd-ers are unknown to

21. There are also important regional differences in salary levels in Côte d'Ivoire. In contrast to the Katiali region where herd-ers earned an average salary of 9,350 CFAFr, herd-ers in the Sirasso area earned 11,950 CFAFr/month.
22. One sedentary herd-er informed me that he worked for more than twenty years as a transhumant hired herd-er in the Korientze area of Mali and only received the milk of six cows as payment for his services. As a sedentary herd-er in Katiali, he earns 6,500 CFAFr/month, plus food (maize only) and lodging. He also has the right to the milk of 25-35 cows which sells at 100 CFAFr/liter (Interview with A. Sidibé, 28 February 1992, Katiali).
23. Surprisingly, many herd-ers were unaware of the tensions between farmers and herd-ers before migrating.
their employers and turnover is very high. The average period of employment for the 30 herders surveyed for this study was nine months; the median was five months. Anyone who works for more than a year with the same herd owner is considered to be an “old hand”. In hiring a stranger, the herd owner’s principal concerns are animal theft and crop damage. Owners are skillful tracking missing animals which tends to minimize cattle thefts. However, crop damage is more difficult to control and the stakes are high. In addition to the expense, the owner’s reputation is in jeopardy. If it is believed that his herd is the cause of repeated crop damage, a herd owner may be forced to move elsewhere. To protect their wealth and reputations, herd owners take a number of precautions. For example, sons or trusted hired herders are asked to monitor the activities of new recruits and report on their behavior. Herd owners also visit their animals more frequently to check up on their new herders. If possible, herd owners prefer to hire individuals who come from their home region because they tend to be more respectful and honest.

What explains the high proportion of non-kin working as herders? Herd owners and salaried herders gave a number of explanations. D. Sangaré, a herd owner, noted that when he was a boy there were salaried herders but not in such large numbers. He believes that the principal reasons for their prevalence today are twofold: 1) large herds force herd owners to divide their cattle into smaller units for efficient grazing; and 2) the sons of herd owners do not want to work as their elders did in the past. According to herd owner S. Sangaré, “the young people do not want to follow the animals; they do not want to suffer. They do not want to work but still have everything”. Salaried herders like M. Diallo and B. Barry shared similar observations. When asked why the sons of herd owners do not work as herders, Diallo replied that “they are afraid of work and they are afraid of Senufo farmers”.

It is not that young Fulani men have an aversion to work. The cattle poor must work hard to attain the freedom, independence, and leisure that is idealized by the Fulani (Reisman 1977; Grayzel 1990: 44-48). But if their elders can afford to hire cattle herders, young men are happy to lead the aristocratic lifestyle their culture so highly esteems. This lifestyle has always been contingent upon access to extra household labor. Servile labor was critical to this privileged status in the precolonial period. Today, wage laborers perform the same function. However, this “free labor” is qualitatively different from servile labor in that the quasi-kinship status of the latter is replaced by a “stranger” status with little commitment and obligation to

his herd owner. The relative freedom of hired herders to quit their job gives them leverage in the production process that the maccube and rimaaibe never possessed. Although herd owners acknowledge these different power relations, hired herders generally feel that they are treated like slaves.

Herd owners and their families typically view salaried herders as possessing a very low social status. Hired herders repeatedly described the social distance between them and herd owners in bitter terms. A Sirasso herder, B. Barry, stated that:

"The owners do not respect us; when they come to visit their herds, they consider their animals first and then they look at us. The bandit Fulani [i.e. the sons of Fulani herd owners], they have no respect for us whatsoever! They do not even talk to us because we do not have any money... Herders are often unhappy with their salaries and are always looking to switch to another herd owner. Many don't care what the animals do".27

M. Diallo, a thirty-year-old herder from the San region of Mali, similarly stated that "the young Fulani do not respect us. They say we are dirty and sleep in the bush".28 S. Sangaré, a herd owner in the Katiali region, echoed these class sentiments when he admitted: "Salaried herders and the sons of herd owners do not have the same ideas. They cannot talk for very long".29

Some SODEPRA officials were explicit in linking the working conditions and low social status of hired herders to crop damage. One sector chief said that "the herder's behavior is linked to the fact that he is super-exploited. The Fulani (herd owner) is arrogant and the herder takes revenge by committing crop damage. He purposefully does this to discredit the herd owner".30 Indeed, two hired herders declared that some herders deliberately cause crop damage as a way of seeking revenge on herd owners who pay them poorly. One livestock official argued that hired herders were considered by herd owners to be members of "a third or fourth class, as if they were their slaves". When asked if his herders were slave descendants of the Fulani, S. Sangaré said: "Salaried herders are not former slaves. They are simply poor. They are the slaves of money".31

In 1984, herders went "on strike" in the Kiemou area to demand higher pay. They let their herds wander in the bush unattended until they were promised higher salaries.32

Herd owners feel that they have little influence on their herders' behavior. D. Sangaré expressed a common sentiment of herd owners when he said: "It is difficult to control herders; it is they who are in command, not us. If a herder causes crop damage, it is the owner who pays. If there is too

30. Interview with Dr Kone, SODEPRA, Korhogo, 3 March 1992.
much damage, the owner’s name will be ruined in the area”. If herders had their salary cut every time they caused crop damage, herd owners feel there would be less damage. But they fear that herders would complain to administrative authorities and herd owners would end up paying their salaries in the end. Instead, a common practice is to dismiss a herder if he commits crop damage more than twice. Even this can be difficult as the following story told by a herd owner illustrates.

“One day I went to visit one of my herds grazing near the village of Tiébila. When I arrived I saw that the herd was too close to a field and told the herder to move it to a different location. The herder said he would but when I returned the next day, the herd was still there and had just caused crop damage in a nearby field. The field owner came up to me and my herder at that very moment and asked for 90,000 CFAFr [approximately $325] in damages. The herder argued that I should not pay the farmer, saying that his animals did not enter his field. To me it was clearly my herder’s fault and so I paid the farmer. This was not the first time that this herder was responsible for crop damage so I told him that his job was finished but that I would pay him the rest of his monthly salary. The herder became angry and called me an idiot for giving money to the farmer and said he was not going to leave. When I insisted, he drew a knife and threatened me by saying that he would only go if I paid him 15,000 CFAFr [2500 more than his monthly salary]. Otherwise, he was planning to stay. I paid him the 15,000 CFAFr and he left”.

In recounting this story, D. Sangaré conveyed a sense of fear and frustration with the behavior of such herders. “You have to be careful with herders. If you say something negative to them about their work, they will spread false rumors among the other herders and then you lose their cooperation... If you get them angry, they might kill you”. Herd owners feel frustrated over their inability to find conscientious herders who will better manage their cattle. A common litany of complaints is that herders do not corral herds at night, which encourages individual animals to stray; herders leave animals unattended in the bush while they visit a neighboring village; they are untrustworthy and will steal animals if the opportunity arises; and that they will deliberately cause crop damage to take revenge on herd owners.

In summary, from the herd owner’s perspective, salaried herders are prone to carelessness, theft, duplicity, slander, sabotage, and aggression. However, such behavior can be interpreted as “everyday forms of resistance”, as the unorganized political activities of subordinate groups against appropriating classes (Scott 1987). They represent attempts on the part of salaried herders to mitigate the precarious nature of their work and their exploitative working relationship with herd owners. They are widespread but uncoordinated and individual acts that give herders some leverage in their struggles with herd owners over the conditions of work. This section

34. Interview with D. Sangaré, Katiali, 14 June 1986.
35. Ibid.
suggests that these contemporary power struggles are embedded in a social and cultural history in which servitude and salaried herding are virtually synonymous. Both herders and herd owners are conscious of this class history as they negotiate new relations of production. Such tensions over the quality and control of labor reflect the classic struggle between capital and labor over the conditions and appropriation of work. However, the fact that virtual strangers are guarding the wealth of herd owners gives the politics of pastoral production a distinctive cast. Herd owners are vulnerable to the actions of herders to the point where their very production system is in jeopardy. Consequently, Fulani herd management must be seen as a compromise between the opportunistic strategy favored by herd owners and what hired herders (and rebellious farmers) will allow them to practice.

Salaried herders play a significant role in Fulani livestock raising in northern Côte d'Ivoire. This is apparent not only in the high percentage of non-household herders employed by herd owners but also in the role they play in carrying out opportunistic grazing strategies. Successful livestock raising is contingent upon the mobility of herds and their capacity to exploit range resources that are temporally and spatially unevenly distributed. Although herd owners regulate the general timing and location of local herd movements and long-distance transhumance, herders are responsible for the day-to-day care and welfare of cattle. Hired herders also assume more responsibility for herd movements during the dry season when animals are on transhumance and the frequency of herd owner visits decline. In sum, the capacity of herd owners to seize optimal grazing opportunities and avoid animal health problems is dependent upon the widespread employment of hired herders.

Yet, the flexibility of the Fulani to adjust to environmental variability is constrained by productive relations between hired herders and herd owners. Class tensions, hazardous working conditions, and relatively low salaries generate a high level of dissatisfaction among salaried herders. This discontent is apparent in high turnover rates and everyday forms of resistance that are conducive to crop damage. For their part, herd owners are frustrated by the failure of hired herders to devote more care to their work. They believe that herders could do a better job in avoiding crop damage. Herd owners are particularly concerned that salaried herders will jeopardize their already fragile relationship with their Senufo hosts. Their vulnerability to the performance of herders makes some owners feel that salaried herders have the upper hand in the productive relationship. It is these tensions over the quality and control of salaried labor that characterize the politics of pastoral production in Côte d'Ivoire.

The significance of these struggles for current discussions on indigenous
Resource management should be clear. At the very least, they indicate that we need to go beyond the cataloguing of "traditional" livestock and range management techniques (Gritzner 1988; Niamir 1991) and devote more attention to the political-ecological dimensions of their implementation. As the literature on social differentiation has shown (Sutter 1987; Little 1985b), we can no longer simply refer to "the pastoralist" in our discussions of livestock raising and herd management. Marked variations in the mobilization of labor between wealthy and poor households compels us to examine differing capacities to engage in opportunistic grazing strategies. It is this interplay between environmental and social processes that underscores the need to integrate the concept of production politics into our models of livestock management. I suspect that as we give greater attention to the political-ecology of herd management we will be in a better position to explain discrepancies between optimal models of resource use and actual practices.

Department of Geography, University of Illinois, Urbana-Champaign, 1993.

BIBLIOGRAPHY

ARDITI, C.

BASSETT, T.

BEHNKE R. & SCOONES, I.

BENOIT, M.

BERNADET, P.
Blench, R.

Bonfiglioli, A. M.

Bovin, M.

Boutrais, J.

Burawoy, M.

Dupire, M.

Food and Agricultural Organization (FAO)

Gallas, J.

Grayzel, J. A.

Gritzner, J. A.

Homewood, K. & Rogers, W.

International Livestock Center for Africa (ILCA)

Kientz, A.
LITTLE, P.

McCABE, J. T.

NIAMIR, M.

PETIT, R.

QUEANT, T. & ROUVILLE, C. DE

REISMAN, P.

SANDFORD, S.

SCOTT, J. C.

SIKANA, P. M & KERVEN, C. K.

SODEPRA (Société pour le développement de la production animale)

SPERLING, L. & GALATY, J.
HIRED HERDERS IN FULANI PASTORALISM

Stenning D.
1959 *Savannah Nomads* (London: Oxford University Press).

Sutter, J.

Swift, J.

Turner, M.

Watts, M.


White, C.