Pro-Poor
Livestock
Policy
Initiative

Trade, Political Influence and Liberalization: Situating the Poor in the Political Economy of Livestock in Senegal

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A Living from Livestock

PPLPI Working Paper No. 8

TABLE OF CONTENTS

PREFACE

This is the eighth of a series of Working Papers prepared for the Pro-Poor Livestock Policy Initiative (PPLPI). The purpose of these papers is to explore issues related to livestock development in the context of poverty alleviation.

Livestock is vital to the economies of many developing countries. Animals are a source of food, more specifically protein for human diets, income, employment and possibly foreign exchange. For low income producers, livestock can serve as a store of wealth, provide draught power and organic fertiliser for crop production and a means of transport. Consumption of livestock and livestock products in developing countries, though starting from a low base, is growing rapidly.

This paper presents a case study of how livestock policies are made and implemented in a national context, and how they can be improved to better serve the interests of the poor in Senegal. The study used the key informant method supplemented with official documents, newspaper sources and recently published research on the livestock sector. Interviews helped reveal policymakers' concerns, whereas field trips allowed the researcher to talk to farmers and learn their perspectives from the bottom. Strategic entry points are recommended that can both improve the performance of the sector and the participation of the poor in productive activities.

We hope this paper will provide useful information to its readers and any feedback is welcome by the author, PPLPI and the Livestock Information, Sector Analysis and Policy Branch (AGAL) of the Food and Agriculture Organization (FAO).

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Keywords

Senegal, policymaking, livestock, rural development, poverty.

Date of publication: 15 January 2004.

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ABBREVIATIONS

AGROPROV	Association de Groupements de Producteurs d'Ovins
AFD	Agence Française du Développement
CNA	Centre National d'Aviculture
CNCR	Conseil National de Concertation et de Coordination des Ruraux
DIREL	Direction de l'Elevage
FAFA	Fédération des Acteurs de la Filière Avicole
GIE	Groupement d'Intérêt Economique
GRET	Groupe de recherche et d'échanges technologiques
ISRA	Institut Sénégalais de Recherche Agricole
MDE	Maison des Eleveurs
ONCAD	Organisation Nationale de Coopération et d'Assistance pour le Développement
OSB	Opération Sauvegarde Bétail
PACE	Pan African Control of Epizootics
PAPEL	Programme d'appui à l'élevage
PARC	Pan African Rinderpest Campaign
SAPROLAIT	Société Africaine de Produits Laitiers
SATREC	Société Africaine de Transformation, Reconditionnement, et Commerce
SERAS	Société d'Exploitation des Ressources Animales au Sénégal
SODESP	Société de Développement de l'Elevage en Zone Sylvopastorale
SODEFITEX	Société de Développement des Fibres Textiles
SONACOS	Société Nationale de Commercialisation des Oléagineux du Sénégal
UEMOA	West African Monetary Union
USAID	United States Agency for International Development
VSF	Vétérinaires Sans Frontières

EXECUTIVE SUMMARY

This report provides an analysis of the political and economic context within which livestock related policies and organizations are formed and operate in Senegal. The report addresses the political and economic forces that limit the effectiveness of policy reform in the livestock sector and suggests plausible points of entry for the implementation of pro-poor livestock policies, taking into account political realities in Senegal.

A number of political and economic factors limit the possibilities for implementing pro-poor livestock policies in Senegal:

- An economic system that has long depended upon mono-crop agricultural production (the groundnut);
- A political system generally favoring policies which reinforce this macro-economic situation, partially or largely because of the influence of certain groundnut producers;
- A strong dependence on food and industrial imports, creating trade deficits, a state imperative to prioritize export earnings in order to balance this deficit, and very wealthy and influential interest groups in the import sector;
- Centralized decision-making and a hierarchical and rigid bureaucratic administration that limits communication and undermines real negotiation and consultation with the poor population; and
- Clientalist modes of political organization.

Part I of the report surveys political and economic developments in Senegal, particularly in the livestock and agricultural sectors, beginning with the French colonial period. It is divided into five parts:

- **French Colonial Legacy:** This section emphasizes two important legacies of French colonial rule. First, the French administration introduced and encouraged the expansion of groundnut production. The French worked closely with the emergent Mouride brotherhood to achieve higher production levels. This helped Mouride leadership to cement their position as landholders and patrons. In addition, the expansion of the groundnut trade displaced pastoral producers to the North and South-East of Senegal and created a frontline of conflict over land between the Wolof agriculturalists and pastoralist populations. Second, the French livestock administration bequeathed to the livestock services of independent Senegal a situation in which veterinarians dominated the entire administration of the sector. The dominant ideology of the veterinary administrators remained one of tutelary care of livestock producers, focus on animal health issues, and a hope of achieving intensive, stable production.
- **Post-Independence Political and Macro-Economic Dynamics:** This section illustrates how the post-colonial state depended upon patronage networks, often with the Mouride leadership playing a central role, to retain power. The state pursued macro-economic and political policies that favored urban consumers at the cost of rural producers. Instead of addressing rural problems through general, public policies, such as altering monetary policy, the state favored the distribution of divisible, private goods to rural producers. The policy managed to secure political support, but it was economically disastrous.
- **Liberalization of the 1980s and the New Agricultural Policy:** In the 1980s, faced with serious fiscal crisis, the state under A. Diouf's leadership, began a program of

structural adjustment. Diouf implemented an agricultural policy that called for the withdrawal of the state from much of its previous roles. The disengagement of the state weakened the organizational capacity of the livestock and agricultural sectors.

- **Stakeholders in the Livestock Sector:** This section reviews the interests, capacity and importance of various stakeholders. The Ex-Ministry of Agriculture and Livestock was rigid, dominated by agricultural concerns and lacked any consultative mechanisms to work with livestock producers or stakeholders. The Direction de l'Elevage lost much of its capacity with the cut backs of the 1980s and 1990s, but as an organization, is reluctant to give up its monopoly of government influence in the sector. Research institutes, professional organizations, non-governmental organizations and donor agencies are quite numerous and active in Senegal; however, they do not have normalized influence in policy making. Livestock producer's organizations suffer from unrepresentative leadership, incapacity, and divisions often fomented by the Direction de l'Elevage.

- **Presidential Transition and Recent Politics:** This final section comments on the current possibilities and constraints facing livestock producers' organizations as evidenced by the Doli affair in 2003. It also discusses the agricultural project of the new Wade government, whose discourse has focused on the development of agri-business, and the concerns it has sparked among livestock producers and advocates on their behalf. It briefly discusses the complex and likely changing role of the Mouride brotherhood in politics today.

Part II of the report focuses on the sub-sectors of meat, dairy and poultry. In analyzing each sub-sector, it offers politically plausible policy reforms for increasing the sector's contribution to poor producers' livelihoods.

- **Meat Sector:** The meat sector is plagued by unduly high transaction costs. Suggestions to reduce these transaction costs include: securing credit for intermediaries in the sector so that they can pay upfront in cash for livestock and assisting rural producers to enter into the Dakar market by facilitating transportation. Also, the infrastructure of the meat sector is in a state of disarray. Private investments are not forthcoming because of the risk involved and the high costs of improving required equipment; therefore securing private investments will likely require intervention by the state or other concerned actors, such as foreign donors.

- **Dairy Sector:** Influential interest groups involved in the importation of cheap powdered milk from Europe dominate the diary sector. Poor producers are highly disorganized and their fresh milk cannot compete with cheap powdered milk. There is little, to no, infrastructure for the distribution of local milk products. Because of the unequal nature of interest group representation in the sector, most pro-poor interventions are of limited political viability. Still, organizational support of distribution networks in the secondary cities could assist producers, as could a system of "branding" local products to distinguish them from imports in terms of quality and nutrition.

- **Poultry:** Stiff competition from extremely cheap, frozen imports of chicken parts limits the development of the poultry sector. Those involved in importation have much political weight, although semi-industrial poultry producers are organizing to further the cause of local producers. Rural producers are dispersed, unorganized, and face input (feed and medicine) and transportation shortages. Improving government capacity to control cold chain regulations may provide one means of limiting imports. Disseminating medicine and information on alternatives to corn for feed may help local producers to be more competitive.

INTRODUCTION

The Pro-Poor Policy Livestock Policy Initiative recognizes that "policy and institutional frameworks that are rarely pro-poor and that sometimes encourage forms of production that threaten long-term environmental stability and public health"[1] often constrain livestock's potential to improve the livelihood of the world's poor. The initiative hopes to reform these policy and institutional frameworks. This report is intended to facilitate and support "the formulation and implementation of policies and institutional changes that have a positive impact on the livelihoods of [the Senegalese] poor". To do so it provides a thorough review of the current political and economic context within which livestock related policies and organizations are formed and function.[2] It further seeks to suggest points of entry for changing policy and institutions.

There is a pressing need in Senegal for a re-evaluation of livestock policy and a valorization of the sector in the Senegalese economy and political circles. Livestock contributes significantly to the survival and income of approximately 30% of Senegal's households. In most rural areas, livestock production provides a means of adding value to agricultural bi-products from mono-crop production, needed nutrition via milk consumption, and draught power to enable crop production. It also serves as a form of savings and financial security. Particularly for female members of the household, raising short-cycle livestock helps to meet financial obligations and run the household. Livestock also plays an important role in the larger Senegalese economy. Its contribution to the Gross Domestic Agricultural Product is estimated to be 35.5%. Despite the obvious importance of the livestock sector to poor populations' survival and to the Senegalese economy as a whole, the sector has received little attention in past years if we compare it to investments in the agricultural sector. Currently, it receives roughly 4% of all state investments in agriculture (République du Sénégal. . . 2001: 2).[3]

In order for livestock to improve the livelihood of the poor population of Senegal, there are a number of economic and political constraints that must be overcome. This report's primary concerns are these economic and political constraints, their practical impact on the livestock sector, and the possibilities for remedying or overcoming them. These economic and political constraints can be briefly summarized as:

- An economic system that has long depended upon mono-crop agricultural production (the groundnut);
- A political system generally favoring policies which reinforce this macro-economic situation, partially or largely because of the influence of certain groundnut producers;
- A strong dependence on food and industrial imports that creates trade deficits, a state imperative to prioritize export earnings in order to balance this deficit, and very wealthy and influential interest groups in the import sector;
- Centralized decision-making and a hierarchical and rigid bureaucratic administration that limits communication and undermines real negotiation and consultation with the poor population; and

[1] FAO Pro-Poor Livestock Policy Facility. Project Description.

[2] Ibid.

[3] At least two researchers in the sector expressed concern that these statistics were based on speculation and did not necessarily reflect the amount of families involved in the livestock sector, which might actually be a lower number. It is impossible to be confident of the reliability of statistics in the livestock sector. The lack of reliable statistics poses serious problems for policy formation.

- Clientalist modes of political organization.

This report is divided into two parts. Part I of the report offers a general picture of the political economy of Senegal, its historical origins and its present day realities. Part I is divided into five sections.

- The first, French Colonial Legacy, argues that French colonial policy provided a general economic and political framework in the rural areas that strongly influences the position of livestock producers today. It also examines the legacy of the colonial livestock administration on current livestock administration practices.
- The second section, Post-Independence Political and Macro-Economic Dynamics, discusses the political practices of the one-party state and the economic and political consequences of the continued tyranny of the groundnut economy.
- The third section deals explicitly with the economic liberalization of the 1980s and the new agricultural orientation of the state.
- The fourth section examines the state institutions that work with livestock producers, as well as other stakeholders in the livestock sector. It examines in detail the relationship between the institutional capacity and rigidity of the Senegalese state and the effectiveness of livestock producers' organizations in advancing the demands of livestock producers.
- The final section examines how the system has changed since the arrival of the Wade government in 2000.

Part I concludes with a brief summary of the constraints to the implementation of pro-poor policies and suggests possibilities for pro-poor interventions.

Part II is a sub-sector specific analysis of the livestock sector. Because of their importance to the future of poor livestock producers, it focuses on the meat (large ruminants and sheep) sub-sector, the dairy sub-sector, and the poultry sub-sector. In each case, it addresses the relevance of the sub-sector to the poor population, the current state of the sub-sector in social, economic, and organizational terms, the limits poor producers face in gaining profits and livelihoods from the sector, and the possibilities for making the sector more profitable for poor people. This section addresses policy measures that have been put forth for improving the specific sectors and highlights those policies that are plausible in light of the political and economic context described in Part I.

PART I: POLICY ENVIRONMENT

French Colonial Legacy

In order to explain the low priority given to livestock in Senegal's agricultural policy over the past 40 years, French agricultural policy in colonial Senegal must be taken into consideration. This is not to say that French policy dictated the entirety of post-independence policy-making in the sector, but it did provide a political-economic context in which existing interests favored certain agricultural policies at the disadvantage of others. The low priority given to the livestock sector in the post-independence period must be seen as an outgrowth of French policies regarding groundnut production and political organization, not its livestock policy specifically. Despite an emphasis on agricultural crops, the livestock sector received investments and interest from the colonial administration and French veterinarians. This French intervention in the sector contributed both to its later advances *and* shortcomings.

The colonial livestock sector received a considerable amount of attention in French veterinary circles and administration. As early as 1819, the colonial administration began veterinary research missions in the area. However, colonial attempts to assure a veterinary presence in each West African colony failed. It wasn't until after World War II that a regular veterinary service was established in French West Africa. By 1949, the French has established a veterinary research laboratory at Dakar-Hann, which functions to this day as a state research facility, and a system of regional laboratories, veterinary posts, and hands-on research facilities (Landis 1990: 36).

Veterinary work in Senegal's livestock sector centered around two dominant ideologies. As Landis argues, the colonial veterinarian was guided by the postulate that his primary goal was the fight against animal diseases. He held "the conviction that the sanitary fight is in all cases the absolute priority". His work was that of hygienist, sanitary agent, and immunizing agent (Landis 1990: 40). Furthermore, the colonial veterinarian's primary concern was the welfare of the group and not the specific interests of a given patient. Driven by these convictions, the French made considerable advances in disease prevention and treatment that resulted in increases in the size of Senegalese livestock herds (Oxby 1999: 231 and Landis 1990).

With these increases in herd size arose the need to improve access to water and feed. The French administration believed that if sufficient modern wells could be drilled to reach water reservoirs deep within the ground and if fodder and hay production could be stimulated, livestock could be stabilized and the movement of the pastoralist population limited (Landis 1990: 47 and Oxby 1999). Landis states that this optimistic view of the potential for plentiful water in Senegal came to an abrupt end with the drought of 1972-1973. The research conducted for this report, however, evidenced that this hope for livestock development based upon modern drilling and fodder still lies at the base of the state's vision of the sector. While policy makers and observers are more realistic about its limits, this general framework for development remains prevalent in state documents and officials' perceptions. Several informants in the *Direction de l'Elevage* (DIREL) insisted that Senegal possessed a significant potential for fodder production that could be exploited to stabilize herds and increase animal health and size for sale. They did not, however, have any ready answers for overcoming the financial and social impediments to a restructuring of pastoralist modes of production.

At the time of independence, the administration of the livestock sector in Senegal differed from most administrations in Europe in its complete dominance by veterinary doctors. In France, between the first and second World Wars, zootechnicains and agronomists gained the foreground in the study of livestock economics and problems, leaving veterinarians responsible only for matters of pathology and physiology. In Africa, on the contrary:

> *[Veterinary doctors'] unquestionable first arrival, their dynamism, the solidarity of their implantation, the importance of the economic consequences of livestock disease, and the shining successes obtained in the fight against these scourges, provided veterinarians with weighty arguments needed to defend their monopoly. They did this with success, and they retained total control of the services de l'élevage until independence, and bequeathed to their African colleagues an unambiguous situation in this regard (Landis 1990: 37).*

To this day, veterinarians have managed to retain a monopoly on the official administration of the livestock sector. The consequences of this monopoly should not be ignored. It has ensured that the administration of the livestock sector focuses around the dominant ideologies of the profession that see the animal as the primary unit of analysis and action. Disease and hygiene remain the basic targets of almost all administrative action. As more than one social scientist observed, the complete absence of social scientists in the administration limits its capacity to find durable solutions to the problems that the pastoralist population faces, which necessarily involve sensitive social and cultural questions.

Finally, in the French colonial administration lies the basis for the view, oft expressed in interviews, that the Peul[4] possesses great wealth if only he could get over his obsession with maintaining a large herd and sell his animals regularly. Some colonial veterinarians saw Peul behavior as deplorable but inevitable due to climatic and market conditions. Others believed that if only they could keep tabs on, tax, and teach the Peul, he could become a reasonable economic actor.[5] Hence, beginning in the colonial period the role of the *services de l'élevage* was to cajole livestock producers further into the market economy for the good of the colony and to free them from their own ignorance and backwardness (Landis 1990: 51-53).

As discussed above, the legacy of French colonial veterinary administration on the internal dynamics of the DIREL is still strong today. Another, perhaps more important French legacy in the livestock sector, is the dominance of the groundnut economy in all agricultural matters. The administration introduced the groundnut as a cash crop in Senegal in 1840 (Copans 1972). By independence in 1960, the groundnut represented 80% of the state's exports (Diop and Diouf 1990: 153). As Cheikh Ba argues in his work on the Peul, the introduction of the groundnut fundamentally altered the conditions of the livestock sector and the pastoral economy forever (Ba 1986: 75).

This transformation occurred on two levels. Firstly, the groundnut economy effectively created the pastoral zone through sedenterization and displacement. Its growth was responsible for the spatial delineation of different livestock production zones and vicious conflicts over land and the definition of "space" that we see today (Ba 1986: 79). On a political level, the groundnut economy offered an economic force to strengthen the Mouride brotherhood as a political actor and its large landholders as patrons and intermediaries (Copans 1988).

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[4] The Peul ethnic group is the primary ethnic group involved in pastoralism, however, not all Peul are pastorlists. In English-speaking Africa this group is generally referred to as the Fulani.

[5] Developments toward a more culturally aware or economically nuanced understanding of Peul behavior were slow and did not make much ground.

The groundnut economy contributed both to the sedentarization of parts of the pastoralist population in the groundnut basin and the displacement of others toward the North and the East. Groundnut production required large areas of land, which generally were secured at the expense of migratory populations in the forested areas. The French offered land grants to those intending to undertake groundnut production, primarily the Mouride marabouts, and permitted the large-scale clear-cutting of forests in the central area of Senegal, now known as the groundnut basin. The region north of the Gambia, which had before been an area of migration "found itself divided into three zones with different socio-economic and demographic characteristics: the sylvo-pastoral zone, the agro-pastoral zone, and the fundamentally agricultural zone" (Ba 1986: 77). The sylvo-pastoral zone emerged as a result of the displacement of pastoralist populations and the functional separation of livestock and agricultural practices, a separation unknown prior to the groundnut. Furthermore, ethnicity as an indicator and dictator of territorial origin gained new ground (Ba 1986: 77-8).

As the Wolof population relocated to the groundnut basin to undertake primarily agricultural endeavors this zone become "Wolof territory". The sylvo-pastoral zones to the north became *the* territory by default of the pastoralist population. The groundnut economy pushed livestock production to the periphery of Senegal—the North (Ferlo and Vallée du Sénégal), Sénégal Oriental, and the Casamance. The installation of agricultural producers in central Senegal and the displacement of those involved in livestock toward the periphery created a huge front-line for conflict between the two groups (Ba 1986: 164). This front-line has since been the scene of violent, sometimes deadly, conflict between the two groups.

In order to understand how the groundnut economy was able to so profoundly alter the physical and social landscape of Senegal, one has to consider the role of the Mouride brotherhood in the spread of the groundnut. Founded at the time of the colonial conquest, the Mouride brotherhood emerged as a new form of social order at a time of social chaos (Diop 1984: 48). The brotherhood gained most of its adherents from the Wolof population, where the colonial conquest had the most devastating consequences on prior social organization. The Peul population did not rally around the new brotherhood. Their social organization had not been as violently disrupted as that of Wolof society, making the alternative organization of the brotherhood less attractive. Also, the form of Islam practiced by the Peul population likely made the population wary of the particular religious practices developed by the Mouride brotherhood.

With the encouragement of the French administration, which saw in the brotherhood a means of opening up new land for groundnut production and a source of social stability, the Mourides moved onto "unclaimed" land in some of the most fertile areas of Senegal. When these groundnut producers settled in an area they would both expel the local population and clear the land leaving little in the way of sustainable livestock grazing area. Scholars such as Cruise O'Brien consider this spatial expansion a "colonization of the second degree" by Wolof (generally Mouride) colonialists in Peul land (Cruise O'Brien quoted in Ba 1986: 168). The sometimes violent, always confrontational, move of agricultural populations into pastoral territory since the introduction of the groundnut offers one early cause of pastoralists' aloofness toward agricultural producers and the state which has historically supported their expansion. It also alerts us to the fact that tensions between pastoralists and agricultural producers are not inherent to Senegal. They were not a significant factor in pre-colonial relations, but rather the result of the introduction of an exclusive agricultural system, an ethnically divided production system, and state apathy toward and/or collusion in the colonization of livestock supporting lands.

The French policy toward Mouride leadership helped to establish the brotherhood as an unavoidable actor in any economic or political decision. By extending land grants, financial subsidies, and agricultural inputs to Mouride leaders, who were generally large landholders as well, they strengthened the economic position of the Mouride leadership and helped them to retain their monopoly on the market. Simultaneously, the Mouride brotherhood grew rapidly in number and conviction. The Mouride brotherhood values the complete submission of the disciple (or *taalibé*) to his or her spiritual advisor (*marabout* or *cheikh*) in spiritual affairs. This submission has historically spread to economic and political affairs. The fidelity of Mouride *taalibés* helped Mouride leaders to access free labor for their groundnut plantations and gave them a social influence that colonial and post-colonial officials could not ignore. The marabouts served as effective intermediaries for the colonial government, and the government often operated through maraboutic channels rather than official state channels (Diop 1984 and Cruise O'Brien 1971). Upon independence therefore the new state inherited a relatively weak official rural administration and a rural economy that functioned via religious channels (Diop and Diouf 1992).

The new state's ties to the Mouride brotherhood were cemented when Senghor sought out the support of the Mouride leadership in defeating Lamine Gueye in the first presidential elections. After the elections, Senghor could not risk cutting-off those who had largely been responsible for his election in rural Senegal. Mouride leadership was in a strong position to push its agricultural interest. The newly independent state was desperately in need of export earnings to meet local demands, and the French offered Senegal subsidized groundnut prices. Therefore, the state had no particularly strong interest in slowing the expansion of the groundnut economy.

Post-Independence Political and Macro-Economic Dynamics

In the immediate post-independence period, Senghor and his supporters sought to consolidate their hold on political power through political maneuverings that set the tone for Senegalese politics for years to come. As Mamadou Diouf writes, the newly independent state did not adopt a radically different order from that of the colonial state. Despite Senghor's emphasis upon African Socialism, the centralized, hierarchical nature of the colonial state changed little upon independence. The government, administration, and party all coalesced into one centralized hierarchy (Diouf 1993: 236). Grassroots support and local involvement was limited at best. The rural populations were not involved in administrative structures. "The capacity of the ruling party to reach the population came to be determined by its ability to link up with local power bases, negotiating the participatory support of major local power brokers" (Diouf 1993: 238). Aware of the weaknesses of this type of political structure, the newly independent state sponsored the cooperative movement to mobilize the rural population and integrate it into the development of the state.

While the cooperative movement never involved livestock producers to the same extent as agricultural producers, it is important for what it tells us about the structure of rural politics in Senegal. Diouf (1993) clearly summarizes the state's motivation for creating the cooperatives: nationalize the groundnut trade to secure control of this key economic sector, diversify and modernize a rural economy that had grown too dependent on the groundnut, and gain the loyalty of rural masses by distributing benefits and largess from groundnut profits (Diouf 1993: 238). From its initial stages, the movement faced concerted resistance on the part of local power bosses. These bosses were quite skilled at exploiting existing organizations and political divisions to sabotage the cooperative movement. Debates about the movement exacerbated tensions between Senghor and Mamadou Dia, the Chairperson of the Executive Council and driving force behind the cooperative movement. "When Dia fell in 1962, the conflict ended in the total capture of the cooperative movement by traditional potentates and various tentacles of the State bureaucracy" (Diouf 1993: 239).

The cooperatives became the venues in which local politicians and rural dignitaries increased their personal support networks through the distribution of material or financial goods. The cooperatives became organizations for embezzlement and corruption rather than effective production and marketing coalitions for producers themselves. State intervention culminated in the creation of the National Development Bank of Senegal and the National Co-operation and Development Assistance Board (ONCAD). Both were central state institutions designed to coordinate and support an entire range of government organizations. ONCAD grew into the largest patronage agency of the state, serving political goals well but driving the economy into shambles (Claassen and Salin 1991).

Since independence the Senegalese economy has run a deficit primarily due to trade imbalances. F. Boye argues that the "causes of Senegal's chronic trade deficit are to be found within the national economy" (Boye 1993: 32). Demand for imported consumer goods has always been high. Exports of agricultural goods have never been able to increase as rapidly as demand for expensive imports (Boye 1993: 33). Furthermore, the state has never really tightened its belt. Rural producers have born the brunt of the import bill. Artificially high exchange rates helped to keep import prices down for urban consumers but drove down prices for agricultural products. State monopoly on the purchase of agricultural crops also meant that artificially low prices offered to producers created a surplus for the state to maintain its own patronage network and administration (Bates 1981).

Politically this macro-economic policy allowed the state to sustain patronage networks, appease the urban population, and support an oversized bureaucracy. Economically it led the state toward larger and larger deficits and discouraged rural producers from increasing production levels of much needed crops. The unwillingness to force urban populations and the bureaucracy to live within their means perpetuated a dependence on imported consumer products—most importantly to this study, rice and powdered milk as food staples. The state became locked into the quest for export earnings to keep the system functioning.

In the livestock sector, the government created the first parastatal, the *Société d'Exploitation des Ressources Animales au Sénégal* (SERAS) in 1962 to oversee the commercialization of meat products. The prices SERAS offered to producers were rather dismal. It never was able to really break into and replace traditional channels. The state further created a set of regional agricultural initiatives in the late 1960s intended to develop both the livestock and agriculture sectors. The parastatal organization responsible for organizing livestock producers in the sylvo-pastoral zone (SODESP) offered dismal prices to livestock producers for their cattle (Ba 1986: 232). Raising prices would have been the most apparent means of encouraging producers to participate in SODESP's activities, but the program's grand visions for developing the sector rested upon the re-channeling of profits from producers to the meat industry and the state. As Mamadou Dia wrote in *Le Matin* in May 2003, the livestock producers were given low prices in order to subsidize Dakar meat consumption.

The state could not address rural concerns as a whole but instead sought to appease rural producers on an individual basis. The livestock sector in Senegal illustrates clearly the shortcomings of a private, or divisible goods, solution to the problems of an entire group of producers. With the exception of some recent development projects that can be largely characterized as public goods, state investment in the livestock sector comes in the form of divisible, private goods. That is to say, the state provides inputs, be they food, medicine, or supplies, that can be directed toward specific producers. As one researcher and veterinarian confirmed, state administrators are able to gain individual support via this system of distribution, but the system results in enormous financial waste and inequality. The supply of private, divisible goods has come in at a number of forms, among them: artificial insemination and feed distribution under the auspices of *Opération Sauvegarde Bétail* (OSB).

Since before independence, the prospects of artificial insemination to improve local Senegalese herds have tempted the *services de l'élevage*. Early attempts at genetically altering the local herd population had dismal results (Landis 1990). Multiple observers believe that without appropriate inputs and sufficient limits on cattle migration, genetically altered cattle simply cannot survive or produce as expected. The poorest livestock producers rarely see the benefits of artificial insemination. The program is easily diverted to village leaders and those who already possess more money and cows. Observers see the economic value of artificial insemination to the poor population as questionable at best. If poor producers manage to have cows inseminated, they face serious difficulties raising the cows in optimal conditions for milk production. Furthermore, artificial insemination displaces traditional systems of reproduction. Nonetheless, despite the failures of past genetic alteration campaigns, the state continues to pursue artificial insemination research and campaigns. Economically speaking the logic of the state's continued emphasis on artificial insemination is misguided. Therefore, several informants argued that one must look to the political logic behind artificial insemination campaigns.

Artificial insemination creates divisible resources that the DIREL can distribute to local leaders, influential Dakar-based entrepreneurs, and other livestock producers to gain political support. The DIREL may chose recipients based upon its own political needs, or it may operate under party or administration pressure to target certain recipients. In either case, the benefits of genetic improvement are diverted away from the public good to the private good at the cost of a well-balanced policy for national livestock development.

With the drought of the early 1970s, the state responded to the large-scale starvation of cattle herds by implementing the program OSB. The program involved primarily the distribution of feed to livestock producers. Each year, the state disperses feed to livestock producers who have come to expect the free or subsidized feed for their herds' survival. Numerous observers have put forth proposals for increasing feed supply for livestock during the dry season. One observer with years of experience in the DIREL argued that the current economic and agricultural system in Senegal favors the exportation of agricultural bi-products, such as cottonseed and groundnut oilcakes, that should be used to feed local livestock. Furthermore, requirements that agricultural byproducts be purchased in bulk from parastatals prevent livestock producers from purchasing agricultural bi-products. This observer argued that policies requiring parastatals to sell to local producers or programs to facilitate producer organizations' access to bulk feed which they can sell at reasonable prices would do much to eliminate feed shortages. Despite the need for these types of policy changes, the state continues to invest heavily in OSB feed distribution. Economically the program is shortsighted and unsustainable for the state and producers. Politically the program offers a highly visible means for the DIREL and the ruling party to assist livestock producers in distress, while simultaneously directing state gifts toward certain individuals or groups in exchange for political support (SenIngenière Consultant 2001: 11). Unfortunately it does not solve the root problems of feed shortage or promote sustainable production habits.

Liberalization of the 1980s and the New Agricultural Policy

In 1978, the Senegalese state faced a major financial crisis as export earnings fell (Claassen and Salin 1991: 122). In 1979, Senghor's government undertook a short-term stabilization program under IMF and World Bank pressure. The short-term stabilization program did not draw Senegal out of its financial crisis. When Diouf took power, he undertook a new economic program for the state. Diouf came to power on a platform of technocratic politics. He argued that he would lead the country out of 'politics by the politicians' toward a rational pursuit of technically sound goals and policies. Facing serious international pressures and hoping to further his political goals, Diouf implemented a structural adjustment program in 1985. As part of the program, his government put forward a new agricultural policy. The new policy fit well into the discourse of liberalization and privatization advocated by international donors. It also allowed the Diouf government to move away somewhat from the state-centered governing of Senghor. The state escaped some of the traditional relationships of cooptation and client networks in the agricultural sector. This presented new opportunities, but also real insecurities and doubts on all levels as to the political stability and future of Senegal (Diop and Diouf: 160-170). It permitted a slight shake-up of existing clientalist networks, but did not result in the elimination of clientalist networks altogether. The Socialist Party continued to depend upon clientalist networks for its position in power (Galvan 2001; Fatton 1987).

The new agricultural policy focused on improving peasant income and raising agricultural production. It hoped to do this through better organization of the rural world, a new role for rural organizations, and better management of rural resources, price incentives, credit, and sustainable use of the environment. The new policy represented a huge break with the past in so far as it advocated state disengagement from the rural sector. The private sector was to step into many of the areas previously dominated by the state. Doubts abounded as to the ability and willingness of the private sector to fill in where the state left off (Diop et al. 1990: 171).

In the livestock sector, the disengagement of the state resulted in a weakening of state organizational capacity. Reductions in funding for research, maintenance, and personnel have taken a toll on the entire sector.

Stakeholders in the Livestock Sector: State Organizations, Professional Associations, and Livestock Producers' Organizations

The withdrawal of the state from the livestock and agricultural sector set the background for dynamics in the Ministry of Agriculture and Livestock, the DIREL, and in state research institutions. Organizational dynamics are also strongly influenced by the attitudes and norms of state functionaries within these institutions. Finally, it is apparent that the larger macro-economic environment within which these organizations must operate creates certain institutional imperatives that can have negative effects on the livestock sector's poor. In addition to state organizations, other important stakeholders--professional associations and livestock producers themselves, also influence the livestock sector. This section will address the influence and role of each of these groups in turn.

Ministry of Agriculture and Livestock

Since independence, livestock services have moved from one ministry to another. In 1998, Diouf created a Ministry of Livestock whose life was short-lived. More than one observer pointed out that the motivation behind the creation of the ministry was far less a genuine concern for livestock issues than political necessity. With elections approaching, Diouf was wary of the electoral advances being made by a Peul candidate who appealed to Peul voters by criticizing the administration's livestock policy.

Following Wade's election, livestock was moved under the Ministry of Agriculture and Livestock. Shortly after research was conducted for this study, livestock was once again transferred to its own ministry during a government restructuring in August. Although the ex-Ministry of Agriculture and Livestock was officially responsible for both livestock and agriculture, participants in the sector generally referred to the ministry as the Ministry of Agriculture. A small error on their part, the universal tendency of those involved in *livestock* to consider the ministry as primarily a sight of agricultural policy-making was symbolic of the limited importance given livestock in the daily matters of the ministry. The Ministry of Agriculture and Livestock was often a site of conflicting interests between the agriculture and livestock sectors, and agricultural interests tended to win out. As the Director of the PAPEL (Programme d'appui à l'élevage) pointed out, the ministry invested far more time and money in the promotion of agricultural interests than livestock interests, in the press, in political circles, and in policy debates.

In interviews, observers frequently commented on the lack of consultative institutions in the Ministry of Agriculture and Livestock. In recent years, livestock producers were "consulted" in the implementation phase to get their rubberstamp but not in the policy formulation phase. The institutional framework for producer input into the policy-making process was such that their commentary was rarely received at the highest levels of policy-making. The Ministry received information only once it has passed through the DIREL. As the DIREL had its own concepts of appropriate policy measures and its own allegiances to certain livestock producers' organizations and not others, there was no assurance that the concerns of a given group of livestock producers would make it to the ministry. There was no institutionalized consultative forum within the ministry itself.

Direction de l'Elevage

The state's desire to disengage from its multiple roles in the rural sector has been sharply felt in the DIREL. With the support of the European Union, a successful project of privatization of veterinary services was undertaken by the state in the 1980s. Given the financial incentives of this program and the uncertain future of government employment in those troubled economic times, many veterinarians decided to move to the private sector. New veterinary science graduates find few open positions in the state bureaucracy, and most choose to go into private practice. The state has encouraged private practice by distributing vaccinations and medication via private veterinarians. Currently private veterinarians supply the majority of vaccinations, in particular PPCB and PPR vaccines whose costs are partially subsidized by the state, and animal health services in Senegal.

The system does have problems at present. First, the price of medication though subsidized by the state is still prohibitive for certain livestock producers. Second, the distribution of private veterinarians is not perfect; many areas of Senegal remain isolated and some producers too far from veterinary services. Usually, the state steps into the void left by private veterinarians in highly isolated areas, but the DIREL no longer has the financial means to supply services all over Senegal, nor should it if the state is seriously committed to promoting private veterinary practices. Third, there remain serious local conflicts between state functionaries and private veterinarians. Private veterinarians are supposed to have the monopoly on the sale and distribution of medication and vaccinations in areas where they are present. State functionaries are to fulfill regulatory and administrative functions in rural areas. Nonetheless, state functionaries often engage in immunization and treatment at the local level. They do this for two reasons. They may be able to charge for these services and augment their income. They also see their role in the local area being grossly reduced by political changes at the national level, and some resist these changes. They hold steadfastly to their historical monopoly in veterinary care in the rural area. Functionaries at the national office of the DIREL tended to play down this conflict as being merely local and not a national level problem. Indeed, other observers supported this argument. Nonetheless this unwillingness to give up the historical role allocated to state administration in the livestock sector was quite apparent in discussions with state functionaries at the national level.

While the director of the DIREL is quite aware of the limitations on the DIREL's ability to fulfill even its basic regulatory functions, the DIREL does not seem to have accepted, as an organization, that its shortcomings may limit its capacity to accurately interpret and represent the interests of livestock producers. The DIREL does not seek to be a forum of debate and discussion on livestock issues. Participants in a recent workshop on livestock policy found the DIREL hostile toward their incursion into its traditional domain. While cordially received by the DIREL, professional associations, researchers, and NGOs find the institution closed to real discussion and outside input. The policy prescriptions offered by the DIREL represent internal considerations and priorities, not real outside participation. The discourse coming from those within the DIREL is extremely paternalistic toward livestock producers themselves. To paraphrase a common statement, “We must organize them, as they are not capable of doing it themselves”. The DIREL is receptive only to those livestock producers who chose to voice their concerns through DIREL-sponsored organizations.

Joint Projects

The Ministry of Agriculture and Livestock and the DIREL in conjunction with the European Union, the African Development Bank, and other donors have implemented a number of admirable programs in the livestock sector. The PAPEL is sponsored by the African Development Bank, the Senegalese state, and in small part by the World Bank. It is interesting because of its semi-autonomy from the DIREL in its operation and hiring practices. A committee of professionals chooses the director on the basis of merit. The PAPEL has been working in Senegal since 1992, primarily in the sylvo-pastoral zone and the groundnut basin. Its focus is on raising milk and meat production, and the director hopes, despite its inability to do so in the last ten years, that it will serve as a pilot project for a more general state livestock policy.

The AGROPROV program in the region of Kaolack also provides an example for the implementation of successful livestock programs. A collective of sheep producers, AGROPROV is an oft-cited example of the possible contributions of short-cycle livestock production in reducing poverty. It is also cited as a success case for the use of micro-credit in livestock development. The PACE program financed by the European Union and run under the auspices of the African Union’s International Bank for African Development has made significant progress in fighting epizootics and improving access to private veterinary services in rural areas. The PARC program also contributed greatly to the successful transition to private veterinary services in Senegal (République du Sénégal… 2001).

There are a number of other programs that could be mentioned as successful. Yet, participants in these programs rarely were able to explain what part their project played in the general livestock policy of Senegal. They responded rather that there was NO general livestock policy in Senegal. There are projects, mainly sub-sector, regional, or level specific, which function moderately well, but the success of these projects is limited by a distinct lack of general policy. The policy documents which have come out of the DIREL and the Ministry of Agriculture and Livestock are all-encompassing, all-inclusive prescriptions that advocate a whole range of state interventions, but fall short of a balanced, general policy. Informants outside the DIREL argued that policy prescriptions from within the government do not 1) offer a clear vision of what the government wants the livestock sector to look like in future years, in particular how it intends to incorporate various regional projects, 2) define the role of livestock’s many stakeholders in the sector’s development, 3) set realistic priorities and make required sacrifices, nor do they 4) address issues of land-tenure, macro-economic context, or legal status.

It is impossible to know at present what form the new Ministry of Livestock will take or if it will be a consultative forum for the creation of a general livestock policy in Senegal. The creation of a new ministry offers definite opportunities to change institutional structures and create consultative mechanisms. The new minister is a veterinarian who has worked for years in research and education, but who has not been an insider in the Ministry of Agriculture and Livestock nor the DIREL. He is, however, an active member of the ruling party. It is possible that this type of individual will have the wherewithal to shake up existing institutional norms and dynamics.

Research Institutes, Professional Organizations, Non-governmental organizations, and Donor Agencies

There are a number of organizations currently operating in Senegal that could contribute important policy options to the policy-making process if the mechanisms existed for them to do so. The state-funded *Institut Sénégalais de Recherche Agricole* (ISRA) has an active research laboratory that focuses on livestock science. The laboratory at Hann has been quite successful in producing vaccinations and technical advance in livestock productivity and health. The laboratory is one of the most productive in West Africa and plays an important role in regional livestock developments. As a source of technical expertise and a site for experimentation, it should play a fundamental role in scientific developments in the sector and contribute to policy formulation. The current director is quite committed to poverty alleviation and the development of appropriate technology for poor livestock producers. At present, however, the laboratory is not playing an active role in livestock policy formulation. As a state institution, it has been positioned within an administrative hierarchy below the Ministry of Agriculture and Livestock. While the ministry did not dictate the research program of the laboratory, it did chose what information to use and discard in making its own decisions. The laboratory itself does not play a strong advocacy role in policy-making. Rather, it tends to concentrate on its own projects and/or inter-organizational collaboration.

In addition to the laboratory at Hann, ISRA also regroups a number of social science researchers with expertise in economics, sociology, and agronomy. A number of other research bodies operate in the area. Researchers across institutions have formed the *Pôle Pastoral en Zone Sèche* to address the particular problems of the pastoral zone. Researchers in the dairy sector also communicate regularly and organize workshops on improving the sub-sector. In fact, one comes away from interviews in Dakar research circles convinced of the wealth of research competence and expertise in the area of livestock. Considering the academic expertise present in Dakar, one would expect the research community to heavily influence policy-making. Unfortunately, this is not the case. Researchers often work in conjunction with the state on consulting reports, but find the results of their reports neglected or manipulated. Independent researchers continue to voice opposition to state policies they see as misled, but those within state institutions face certain constraints on their vocal opposition to state policies. As an institution, the ISRA has not taken an active role in debating livestock or agricultural policy. Many observers argued that the IRSA should be the primary site of debate and discussion on livestock issues between researchers, but bemoaned its inactivity of recent years. Without an institutional framework for state/researcher interaction, concerned researchers feel often that they confront a brick wall when attempting to influence policy. As individuals they may receive an audience, but as a group they have few institutional recourses for sharing their expertise with policy-makers.

The *Ordre des Vétérinaires du Sénégal* faces similar difficulties in voicing its opinion on policy-making. Veterinarians outside the state have firsthand experience with many of the shortcomings of government policy and feel particularly implicated in the livestock sector. As such, they have attempted to formulate their own alternate proposals to current livestock policy. They have submitted these proposals and critiques to the DIREL and the Minister of Agriculture and Livestock but to little avail. Despite congenial professional and personal relations between the state and private veterinarians, there is not an equal exchange in policy-making. Disagreements and debate are tolerated by the DIREL at certain times, but policy is made on the basis of internal considerations and priorities not open debate and negotiation.

Other professional associations such as the association of zootechnicians find themselves even more neglected in policy making. Non-governmental organizations, such as ENDA, work in livestock producing zones to empower and assist livestock producers. German development assistance (GTZ) has worked for 30 years in the pastoral zone and has grown considerably in its understanding of policy options through a process of trial and error. These organizations have first hand knowledge of alternate modes of production and possibilities for alleviating poverty, but they are rarely asked to the decision-making table. Unfortunately, some do not appear to be fighting very hard for a place at that table either. There appears to be an acceptance amongst many researchers and organizations working on livestock that they can only address issues outside of state policy-making.

In April 2002, the Minister of Agriculture and Livestock organized a workshop in Kaolack to reflect on the development of the livestock sector. 44 participants ranging from directors and participants of state projects in the livestock sector, private veterinarians, state functionaries, and other professionals came together for two days to discuss means of improving the participatory processes of policy-making and much needed policy changes. The workshop came up with a number of measures that need to occur in the sector, many focused on improving communication, organization, and legal norms in the sector (République du Sénégal… 2002). The DIREL was not receptive to the suggestions of the Kaolack workshop. While many of the suggestions do not seem to go against the general beliefs or practices of the DIREL, one observer speculated that the DIREL responded on the defensive to the workshop because it felt the workshop encroached upon its territory. To this day, no follow-up on the workshop has occurred.

The donor community, by virtue of its financial contribution to the functioning of the Senegalese state, already has secured a position of some influence in policy-making. Unfortunately, most bi-lateral assistance organizations pulled out of the livestock sector in the 70s or 80s. They continue to work in agriculture and had ties to the ex-Ministry of Agriculture and Livestock. The World Bank has been actively working with the ministry to restructure its internal institutions. In addition, the roundtable of bilateral and international donors communicates with the ministry on its opinion regarding policy matters in the arena of agriculture. How seriously these communiqués play into policy decisions is difficult to know. However, donors likely have more weight than many other concerned actors. The final way in which donors may play a part in policy-making is by their funding choices. As representatives of United States' Agency for International Development (USAID), Agence Française de Développement (AFD), and GTZ pointed out, where donor agencies choose to channel funding often affects where the state chooses to focus its attention.

Livestock Producers' Organizations

Without a doubt, the most important stakeholders in livestock policy are livestock holders themselves; yet, this population has the most difficultly organizing to influence policy. Despite the state's promotion of cooperative movements since the 1960s, livestock producer cooperatives emerged slowly and only at the initiative of the DIREL and other state administration. As in the case of many agricultural cooperatives, they functioned primarily as a site of patronage-based political mobilization and rent collecting (SenIngenière Consultant 2001: 10). As noted earlier, the distribution of feed under the OSB was the primary aspect of patronage politics in the livestock cooperatives. During the 1960s and 70s, livestock producers remained under the tutelage of state livestock services and did not begin to create their own independent organizations. Agricultural producers were better situated to organize for their rights as they were concentrated in the groundnut zone, had a history of political organization and activity, and had strong representatives in the Maraboutic leadership. In the 1970s, the agricultural peasantry resisted the state and withdrew from official markets causing great state distress. The livestock-dependent population did not have the means to cause such state consternation.

With the new agricultural policy of 1984, the agricultural peasantry took advantage of state withdrawal to increase their presence in the groundnut market and the political scene. Organizational density in the agricultural areas increased rapidly, with Senegal leading the way in rural organization in the region. Livestock producers lagged sadly behind their agricultural counterparts. In 1984, the state replaced the cooperatives with Economic Interest Groups or GIEs. These GIEs did not fundamentally alter the logic of cooperatives. They became the new bodies for distributing state inputs and as such also became sites of corruption. They became a means for local leadership to access credit, rather than an effective means of representing livestock producers' interests. Furthermore, the livestock GIEs remained under the tutelage of the DIREL and offered little independence to livestock producers (SenIngenière Consultant 2001).

The DIREL has continually created livestock producers' organizations with interlocutors of its choosing rather than encouraging spontaneous organization and/or national organization. More than one observer commented that the DIREL undertakes a divide and rule approach to livestock producers. When independent organizations begin to gain force, the DIREL steps in to organize livestock producers into state-sponsored organizations to oppose independent organizations. The current livestock producer scene is wrought with these divisions. The livestock producers' movement also faces serious internal difficulties stemming from social hierarchy, unequal access to resources, lack of transparency, geographical dispersion, and lack of organizational expertise.

In the last twenty years, Senegal has seen considerable advances in rural organization. The *Conseil National de Concertation et de Coopération Ruraux* (CNCR) is a state-recognized institution that regroups the most important rural organizations of Senegal, including the *Union Nationale des Coopératives d'Eleveurs* and the *Fédération Nationale des GIE d'Elevage*. Through the CNCR these groups have gained national recognition and access to donor funds. The CNCR as an organization commands attention from the Senegalese government in agricultural matters. CNCR representatives are at the table for most negotiation in agricultural matters. The political weight of the CNCR helped to establish the participating livestock producers' organizations as the official interlocutors on behalf of livestock producers in negotiations with the state and donors. Unlike their agricultural counterparts, however, the livestock producers within the CNCR have gained little or no voice in the government decision-making processes that affect them. As one independent researcher with experience as an advisor to the CNCR argued, livestock producers have no influence in the making of policy. The livestock producers' movement lacks organizational and professional capacity. The *GIE d'éleveurs* and the *Union Nationale des Coopératives des Eleveurs* both grew out of the cooperative movement and lacked a tie to the rural base from the start. While both are within the CNCR, they are highly competitive, essentially neutralizing each other.

The historical experiences of the Peul ethnic group also work against their successful organization to influence the state. As a pastoralist population, they largely escaped incorporation into the colonial and post-colonial system and as such have less exposure to and experience with the type of organization required to influence state policy. This is not to say they are somehow organizationally backward, but merely that they are not as well versed in the type of organizational action needed to influence the state. A further point that stems from the ethnic or cultural history of the Peul is the strict social hierarchy that is upheld in organizational structure. In Peul society, age and wealth are the primary determinants of qualification for leadership. Livestock producers' organizations tend to be dominated by an "old boy's club"—a limited number of older, well-off, Peul men who get recycled in all the national level organizations. The leadership is selected only from the older age groups. These age groups have a particular vision of the role of the state as tutelary that younger age groups question. Also, it is primarily made up of better off livestock producers, some of whom may no longer even raise livestock. This clearly poses problems for the advocacy of pro-poor policies. Finally, the leadership represents primarily pastoralists interested in meat production. Because of unequal gender representation, the dairy industry is not represented.

The current director of the DIREL, upon his appointment constructed a new system of representative organizations for the livestock sector. The *Maisons des Eleveurs* (MDEs) were conceived of as interprofessional bodies that would serve as intermediaries between the DIREL and livestock producers. They were also implemented in an attempt to exclude the CNCR and other existing organizations from the consultative process with the state. Most observers argued that the DIREL hoped to secure a form of organization through which it could implement its projects more easily. The reality of the MDEs, according to a number of observers and one report commissioned by the Minister of Agriculture and Livestock, falls far short of its purported goal of improving the livestock sector's organizational field. The MDEs face several serious problems. Producers insist that the MDEs belong exclusively to producers and oppose any participation on the part of technicians, food processors, or other professionals. Government officials and employees are often suspected of influencing the internal decisions of the MDEs via local employees and leaders. Most producers split their energy between a number of organizations that existed prior to the MDEs and the MDEs, retaining membership in the MDE mainly to obtain the government identity card for livestock producers. The livestock leadership within the CNCR sees the MDE as an affront to its power. Leaders have responded both by denouncing the MDEs and simultaneously attempting to position themselves within the MDEs in leadership roles. Needless to say this leads to confusion about who is acting for whom and in what leadership role. The tensions between the MDEs and the CNCR undercut any group effort to influence policy in an effective manner.

Fortunately for the livestock producers' movement, there are important advances being made in independent local level organization. Several observers who are in close contact with rural organizations expressed optimism about the ability of independent local organizations to promote the interests of poor producers. These local organizations are emerging largely under the leadership of a new generation of livestock producer who sees the role of the state as limited and sees a great responsibility for livestock producers in the future of the livestock sector. Often they are more educated than there older counterparts. They focus on such issues as literacy, securing feed for their area, local land conflicts, etc. The challenge in the future will be to group these organizations together at the national level. Part of their strength has come from their focus on local issues. When addressing national level issues, they may lose some of their relevance. Also, they have largely been dependent on personal wealth for operating budgets which makes it difficult for them to expand. Many of these local organizations have been incorporated, some might say, co-opted into the CNCR. This need not be a bad thing. To the extent that the CNCR can be altered by new ideas and gain from movements at the base, the livestock producers' movement may gain newfound capacity to influence policy.

Presidential Transition and Recent Politics

Shortly before research was conducted for this report, a proposed land transfer known as "l'affaire du ranch de Doli" shook Senegal's livestock community. The debates and tensions surrounding the land transfer provide an important case study in the political implications of the tensions between livestock and agricultural production.[6] In March 2003, President Wade confirmed on a radio show his intention to grant 3,000 hectares of the Doli ranch to Jean-Claude Mimran owner of the Senegalese Sugar Company and 51, 000 hectares of the ranch to the Khalife Général of the Mourides, Serigne Saliou Mbacké (Dia 2003). Livestock producers reacted vehemently to the transfer, and Prime Minister Idrissa Seck met with them in May, giving his assurances that the land transfer would not occur. Nonetheless, President Wade issued a presidential decree in late November 2003 transferring approximately 44,000 hectares of Doli to the Klalif Général. Planning is currently underway for the construction of a wall to enclose to the area and the deforestation of the area.

The Doli ranch is a 87,500 hectare "ranch" which the state inaugurated in 1968 as the jewel of what was to be a system of state ranches to secure Senegal's meat supply (Thiobane 2003). After 1968, the ranch housed livestock producers who raised cattle for a series of parastatal enterprises. The ranch never reached the productive capacity hoped. Finally, in 1999 the SODESP was dissolved leaving the Doli ranch entirely under the management of the resident livestock producers. The infrastructure built in the late 1960s has fallen into disarray. The ranch houses far fewer cattle than originally planned. The resident population has not been able to regulate land and water usage (Thoibane 2003).

The inability of livestock producers to get the most out of Doli's potential provided Wade and his government with the justification for transferring usage rights for the land to Mimran and the Khalif General. Wade argued that the land should belong to those who could make the best use of it (Dia 2003). Others argued that the nation would most benefit from the land if it were used productively in a modern, intensive agricultural endeavor. The remainder of the land would also be used for intensive, modern livestock production. According to Abdoulaye Bouna Niang the Director of Livestock, the Khalife General, as the largest agriculturalist in the state, is well situated to lead this transformation.[7]

Livestock producers were outraged at the government's move. Various leaders argued that Bouna Niang was more concerned with his religious obligations toward his marabout than with the well-being of the livestock producer community. They personally attacked him as the mastermind behind this transfer and demanded his removal, arguing that he never supported the residents of Doli. Furthermore, livestock producers attacked the government discourse of modernization and intensification, arguing that it is unrealistic and misleading. Livestock producers further criticized the state's general attitude toward the livestock sector. They complained of receiving little more than lip service in the recent version of the proposed Agricultural Orientation Law released by the state (Guisse 2003a; Diarra 2003). Faced with government resistance to their demands, the livestock producers threatened a meat strike in early June. While highly criticized, the threat of a meat strike helped the producers to gain an audience with Prime Minister Idrissa Seck who reassured them that no part of Doli would be given to anyone (Guisse 2003b).

The Doli case illustrates a number of important aspects of the livestock sector: the modernization and intensification discourse of the Wade government, the relationship between the Wade government and the Mouride brotherhood, the key actors in land control issues in Senegal, the stakes involved in land tenure, the ambiguity of the current land tenure system, and the limits to livestock producers' power. Turning to each of these in turn it is possible to put the last pieces of the political economy puzzle into place before turning to the specifics of each sub-sector.

[6] The author is greatly indebted to Cheikh Ly for pointing out the importance of the "affaire du ranche de Doli" for this report.

[7] Abdoulaye Bouna Niang quoted in *Le Matin* 27 May 2003.

Wade is generally characterized as a president with grandiose visions for the state that often border on the impossible. He is willing to tackle big issues but is influenced heavily by popular reaction. As one observer put it, he reacts to what happens in the streets. Most Senegalese agree that Wade is *the* decision-maker for the Senegalese government. Wade's vision, preferences, and priorities decide almost every public action taken by the state, according to the media and most observers. Wade came to power on a platform of liberalization and progress. He has embraced the liberalization discourse of the international financial institutions and actively promotes free trade.

In the agricultural and livestock sphere, Wade has a grand vision for the modernization of the sector. In recent months, he has spoken several times of Senegal's future as an agricultural powerhouse driven by intense, modern production of a variety of agricultural products. Listening to Wade's discourse, many informants argued that Wade's vision of the future was a vision of agri-business dominated agriculture. Jacques Faye, ex-director of the ISRA, argued that the government hopes to professionalize and modernize agriculture, employing urban unemployed in technologically advanced production, but has not considered what is to become of the rural population that depends upon the land for its survival. The discourse on modernization and intensification is all-pervasive in government circles. As one researcher focusing on pastoral issues commented, it seems that all those in contact with the state feel forced to frame any pro-pastoralist arguments in terms of their capacity to modernize. The dominance of this agri-business oriented discourse makes it extremely difficult for other types of development policies to be taken seriously in policy-making circles. This discourse also puts livestock producers on guard and makes them extremely wary of government interventions.

The Doli ranch affair brings to the fore the stakes and actors involved in land control questions in the Senegalese interior. Since the 1970s, Senegal has been faced with serious drought and desertification. As B. Kanté wrote, "La crise au ranch de Dolly [sic] . . . n'est, au-delà de la polémique, que le résultat de la sécheresse et des intérêts divergents entre une agriculture en manque de terre viables et un élevage en déficit de pâturages"(Kanté 2003).[8] As discussed earlier, since the introduction of the groundnut a frontline of conflict between expanding monocrop production and livestock producers has spanned Senegal. The ecological crisis of the last 30 years has pushed this crisis to new levels. The amount of arable land is diminishing, and an agriculture based on the unsustainable exploitation of the land has come face to face with a system of livestock production based necessarily on mobility and extensive land use.

As the case of Doli illustrates, this battle implies two main camps—the Mouride brotherhood and pastoralists. What could be conceived as a geographical conflict takes on an important religious and ethnic connotation that makes land control conflicts intractable. An advisor to the pastoralist organizations noted that their attempts to solicit the assistance of opposition politicians in the Doli conflict were unsuccessful. No Senegalese politician could oppose the measure publicly and risk alienating their Mouride constituency. For the Peul community, the transfer of land to the Mouride leadership demonstrates that the state is not representative of their interests but rather the hold of Mouride politicians.

The Peul community is correct in assuming a close relationship between the Mouride brotherhood and Wade's government, although the perception that the state is under the hold of the Mouride brotherhood is exaggerated. As already explained, the Mouride brotherhood provided strong allies for the *Parti Socialist* (PS) under Senghor

[8] "The Dolly Ranch is nothing more, if we move beyond the polemic, than the result of the drought and the divergent interests between an agricultural system lacking viable land and a livestock system lacking pastures."

and Diouf. In the 1990s, popular discontent with the PS grew to unprecedented levels. Political liberalization was advancing slowly, and the population largely resented PS maneuvers to guarantee electoral victory. According to L. Beck, beginning in the late 80s, Mouride disciples had begun to resent the religious decrees *(ndigel*) of the marabouts regarding electoral choices. "While the *ndigel* undoubtedly assisted Diouf in his re-election, it was widely considered to have been a strategic miscalculation on the part of the *Khalife* which threatened his reputation and popularity" (Beck 2001). By the 2000 elections, the *Khalif* had backed away from making religious decrees for political purposes. This allowed disciples the freedom to vote for Wade and the *Parti Democratique Sénégalais*, both of which represented much desired political change. Galvan further argues that Wade, a Mouride himself, devoted much time and attention to the Mouride leadership (Galvan 2001). The Mouride leadership thus preferred to take a neutral stance in the 2000 elections, no doubt helping Wade achieve victory.

According to work by Jeanne Koopman, visiting Fulbright Professor in the Institute of Environmental Sciences at the University Cheikh Anta Diop in Dakar, politicians and even international donors have a large stake in the transfer of land to large-scale agricultural producers as well (Kanté 2003). According to Koopman, international financial institutions seeking debt payments may prefer to support large-scale agricultural production that allows the state to meet payments rather than focusing on the environmental and social benefits of retaining forestland for pastoral populations (Kanté 2003).

One of the primary reasons that livestock producers continue to be trodden on in land control matters is the ambiguity of land tenure laws in Senegal. The *Loi sur le Domaine Nationale* which governs land matters gives ultimate ownership of the land to the state. The state then is responsible for allocating land use rights, by a process of negotiation in rural committees, to those producers who will *mettre en valeur* or improve the land. To this day, livestock production has NOT been considered a means of *mise en valeur* of the land. Agricultural endeavors have always trumped livestock production. Furthermore, agricultural production for export or industrial business generally trumps family-based sustenance production. Pastoralists are not well-represented on rural committees and rarely gain the legal guarantees to land tenure needed for their livestock production. The current law is ill-adapted to market conditions and debates on the land tenure system are gaining significant ground. Doli will likely act as a catalyst for further debates under the current government.

Finally, Doli offers demonstrates pastoralists' increasing ability to mobilize in order to affect policy-making, but also their continued inability to truly change state policies. In 1991, the Senegalese state declassified the forest of Khelcom, changing it from a national forest open to pastoralist populations to a groundnut plantation under the control of the *Khalif Général*. The short-term economic advantages were considerable for the state and the *Khalif Général*, but the environmental effects were devastating and ultimately undermined the productivity of the area. In debates on the Doli ranch, politicians pointed to the profitability of Khelcom. When the Khelcom forest was declassified few spoke up to resist the action. No livestock producers actively resisted the declassification. With Doli, almost the entire population reacted. This offers reasons for optimism about livestock producers' potential to mobilize. Nonetheless, we should be wary of drawing too positive an interpretation. Livestock producers were able to react to the Doli issue because it provided a rallying point, a publicly dramatic issue. Their control over the meat market appears to have assisted them greatly, although it is difficult to know if they really would have the means to affect a lasting strike. A strike might have alienated them from the rest of the population. Few, when asked about the potentials of utilizing the meat market to gain political influence, saw it as a feasible means. The organization, solidarity and resources needed simply are not present. In addition, livestock producers did not leave negotiations on an ideal note, for they accepted a verbal assurance in private by the

Prime Minister without gaining written guarantee that the land would not be transferred. This later proved to be a serious error on their part.

Before moving on to Part II, one current debate in the social science literature on the Mouride brotherhood is worth highlighting as it may have significant impacts on the livestock sector. The Mouride brotherhood is in a stage of significant transformation. What began as a rural brotherhood has spread to become the most important international commercial network of Senegal. Certain scholars are pointing to the emergence of a modern form of Mouridism which is cosmopolitan in nature and where leaderships' influence is limited to social and religious mores rather than political patronage (Beck 2001). The validity of this portrayal is debatable. What is clear, however, is that the migration patterns and trade routes of the Mouride brotherhood are quickly transforming it into an urban, international brotherhood. The brotherhood, through its strong socialization processes and support networks, has retained its cohesive strength despite its expansion into new domains across the world (Copans 2000). There is reason to doubt that the primary interests of the brotherhood will remain forever agriculture, as the economic importance of Mouride trade networks to the wealth of the brotherhood, to the business of Senegalese traders, and to the functioning of Senegalese markets in consumer goods will likely continue to grow. If this will allow for new power dynamics to emerge in rural areas remains to be seen, but it may have significant effects. Furthermore, the dominance of Mouride networks in Senegalese trade relations will no doubt play an increasing role in all imports and exports, animal products included. Mouride importers are already involved in the importation of frozen chicken parts, using contacts made through their religious network. If the strength of the brotherhood and the economic strength of importers coalesce in the importation of dairy products, poultry, meat, animal feed, or other animal products, we can expect the livestock sector to face stiff competing interests.

Conclusion: Reasons for Optimism and Points of Entry

The political economy of the livestock sector presented in Part I poses serious challenges to the implementation of pro-poor livestock policies. Nonetheless, it is important to suggest possible points of entry for concerned international and domestic actors and comment on the feasibility of pro-poor policies. Sub-sector specific policies are dealt with in Part II.

- Improving Organizational Representation:
  - **Constraints:** The state administration in the livestock sector is characterized by strict organization hierarchies, lack of consultative bodies, and vested interests in the continued dominance of state tutelage. The general political scene in Senegal is moving toward more democratic openness, but remains centralized and lacks effective channels for non-state participation in policy-making. Presidential and existing organizational priorities dominate the policy-making process.
  - **Possibilities:** The creation of a Ministry of Livestock in August presents the possibility for establishing a new organizational framework. Donors involved in other administrative restructuring, such as the World Bank, may use their influence to advocate the creation of a consultative body in the Ministry.
- Implementing Livestock-producer Friendly Land Tenure Laws:
  - **Constraints:** Agricultural interests continue to predominate in political decision-making. There are numerous vested interests in the status quo. Agricultural priorities of the state seem to favor land distribution for large-scale agricultural production over land distribution for livestock production.

  - **Possibilities:** Current debates over land tenure laws present a unique opportunity to voice the needs of livestock producers. At the local level, agricultural producers appear to recognize the need to somehow incorporate livestock producers into land tenure laws. Mediation and legal assistance for livestock producers is key at this moment in order to assure that the full implications of any legal chances are clear to them.

- Improving Livestock-producer Mobilization:

  - **Constraints:** Internal divisions, often fomented by state administrative bodies, have long split livestock producers' organizations. "Old boys" continue to dominate most organizations. Resources are limited and the numbers and dispersion of producers involved makes coordination difficult.

  - **Possibilities:** Independent livestock producers' organizations are beginning to fill important roles in rural areas; however, they often lack the funding and organizational capacity necessary to expand. Offering support for these local-level, independent organizations may help to rejuvenate organizational capacity of livestock producers.

- Improving Research, Dialogue and Non-governmental Action on Livestock Issues:

  - **Constraints:** State administration is not responsive to research and NGO bodies. There is no encompassing forum for debate and the formation of recommendations and no normalized, formal means of influencing policy decisions in livestock administrative bodies.

  - **Possibilities:** Senegal has a huge resource of researchers, NGOs, and professionals that could provide useful policy recommendations for the state if the channels existed.

- Securing Political Support for Policies that Benefit Poor Livestock Producers:

  - **Constraints:** It is difficult for politicians to support the needs of poor livestock producers because they may face resistance from agricultural producers, Mouride leadership, and urban consumers seeking low prices on imports and on basic foodstuffs.

  - **Possibilities:** Livestock producers may be able to influence public opinion regarding the quality of their products versus imports and garner urban support (see Part II). Human rights groups, an increasingly influential political force in Senegal, have shown some interest in livestock producers' needs. Addressing the needs of livestock producers, particularly pastoral producers, from a human rights' lens might help to garner public support and political attention.

PART II: SUB-SECTOR ANALYSES

The Meat Sector

The meat sector in Senegal encompasses primarily cattle and small ruminants. The producers involved in this sector are generally either Peul pastoralists from the northern Ferlo region or from the extreme southeast of the country or agro-pastoralist producers from the groundnut basin. The largest quantities of bovines are found in the regions of Tambacounda, Kolda, Louga and St. Louis. Small ruminants are also concentrated in these regions and in the region of Kaolack, which is the center of the groundnut economy (République du Sénégal… 2001). If examined in connection with the information provided in Senegal's Poverty Reduction Strategy (2003), it is clear that these areas also have some of the worst poverty indicators in Senegal. In particular, Tambacounda and Kolda have very little access to social services and very high infant mortality rates.

Several observers pointed out that the pastoralist population can, if needed, make profits from the sale of cattle. Nonetheless, the pastoralist population sells cattle relatively rarely. Sale is determined by the financial needs of the family at a given time. A number of observers both within and outside the government argued that cultural norms and values explain, at least partially, pastoralist's hesitancy to sell livestock. For the Peul ethnic group, the quantity of cattle which one possess is a sign of social status. Cattle, as a social form of currency, are exchanged on the occasion of marriage, childbirth, and other important social occasions. The value of the animal is a complex combination of the animal's social import, its economic worth, and its contribution to the family's survival via reproduction and milk production. Cattle are an investment that creates wealth through reproduction, encouraging producers to retain many cattle. In addition, milk production to feed an entire family requires that a producer maintain a rather large herd. As such, a producer must balance the price he can receive by selling the animal with the total value of the animal which goes beyond its monetary value.

Within the government, there is a strong emphasis on increasing the meat supply by pushing pastoralists to overcome their cultural backwardness and stabilize smaller herds, feed them well, and sell them on the market. It is true that the pastoral cultural values help keep many cattle off the meat market. Still, we cannot argue that the Peul population is somehow backward and market or technology averse. They are hesitant to abandon pastoral practices that have been fine-tuned over the centuries to fit the physical environment that surrounds them, but as one observer noted, they are neither adverse to adopting new technology nor adverse to the market per se. What is quite clear after some observation is that the meat market as it stands in Senegal is something any producer would approach with prudence.

The director of the DIREL, when asked about the meat sector, replied that it is in a state of complete disarray. There are no overarching organizational principles, no national-level standards or training, and no effective regulatory control over butchering and sale. The system is still dominated by small networks of exchange based on personal or ethnic contacts. At present, rural producers generally sell their livestock to a Dioula, a Peul trader, the first of many intermediaries through which the animal will pass before reaching its final market, at the local weekly market. Often the producer does not receive full payment at the time of sale, but rather receives a small amount with the rest to come after the final sale of the animal. The Dioula then either transports the animal to Dakar, with other animals purchased in weekly markets, or transports it to a larger regional market, such as the market in Dahra, and sells it to another Dioula (Deme 2003). The transportation of the animal from the weekly or large, fixed market is done generally by truck and animal loses and illness often occur.

Once the Dioula reaches the urban market, he makes contact with a Téfanké, a higher level Peul trader, who serves as the intermediary between the Dioula and the chevillard (large-scale butcher). The Téfanké serves four purposes: he guarantees the chevillard's ability to pay, he houses and feeds the Dioula, he confirms the appropriate price for the animal, and he guarantees the quality and origin of the animal. Finally, once the animal has reached the chevillard, it is butchered and the meat sold on the urban market. The profits made from the sale of the meat filter back through the system of intermediaries with each taking their part, including significant amounts being used to repay transportation costs. Transportation costs also include bribe money that is spent to keep police and state veterinary inspectors from taxing the actual number of animals in the truck and from requiring all the needed documentation. By the time the money makes its way back to the producer, it reflects only a small percentage of the actual final sale price of the animal. Sometimes, the animal's health may have deteriorated along the trip as well, in which case the producer will receive far less than expected.

The rural producer has a number of clear reasons to avoid selling animals when possible. His distance from the Dakar meat market limits his knowledge of the final price of the animal. It also means that he is dependant on a number of intermediaries to reach the Dakar consumer. These intermediaries each take their percentage of the animal's final price. Considering the extremely high levels of trust that must exist for producers to offer up their animals on credit, they cannot shop around, changing intermediaries whenever one offers a better price. This type of trust can only come from continued interaction and/or ethnic and family contacts. The producer is often selling an animal because he is in need of money and has often traveled a great distance to the market; he cannot then be too picky about the price offered by the Dioula (Turner and Williams 2002).

There has been a tendency among those involved in the meat sector to denounce the intermediaries as parasites on the system. This portrayal misses the important role that intermediaries play at present. As Deme argues, the state does not have the capacity at present to perform the regulatory duties needed in the sector. The Téfankés provide much needed information on market prices and animal flows and demand, which the state cannot (Deme 2003). The system provides the sort of flexible credit needed in the sector. The banking system is not adapted to the needs of livestock producers, buyers, or meat sellers. The banking system's policies on reimbursement are too rigid and its demands for contractualization are in sharp contrast to the trust-based, informal relationships between the sector's actors. Until the state and private sector can provide the regulatory, information supply, and credit services needed to keep the sector working, the intermediaries will remain indispensable.

The meat sector is plagued by unduly high transaction costs that diminish the real value of the animals sold by livestock producers. These transaction costs need to be reduced in order for poor livestock producers to increase their profits from the meat market. There are several possible means to help increase profits for poor producers in the meat sector:

- Secure credit for intermediaries in the sector so that they can pay in cash, upfront for livestock at all points. A focus on creating appropriate credit provision for traders would allow for them to pay livestock producers at the point of purchase. This would allow for competition between traders at the producer level, likely resulting in higher prices for the animals. Producers could make strictly economic choices based on price, instead of always concerning themselves with relationships of trust and regularized exchange with the trader as required when they do not receive payment up front.

- Assist rural producers in entering into the Dakar market by facilitating transportation and breaking down the monopoly intermediaries currently hold in the final sale of livestock for slaughter. This may allow producers to play a more active role in the market. If they become more implicated in the urban market this could give them negotiating power vis-à-vis the state that could be used to push for needed socio-economic programs and changes in livestock producing regions.

Senegal's meat sector is growing. Demand for meat is rising, but only as a result of population growth. Per capita consumption is falling. Since 1994, the purchasing power of Senegal's population has not allowed them to increase meat consumption. Indeed it is doubtful whether increasing meat production would help anyone in Senegal in an economic sense. The market cannot absorb more meat without prices falling. If prices fall, then producers have little reason to produce more animals, as prices are already dismally low from their standpoint. As such a focus on increasing profit margins for producers is a more sound policy than focusing on increased production.

Agro-pastoralists in the groundnut basin are better situated to profit from their livestock than those located in the extreme south and north. They are closer physically to the Dakar market which cuts down on transportation costs and animal losses. In addition, they have more ample feed supplies because of the presence of agricultural bi-products. For this reason, many agro-pastoralists are involved more in the fattening of animals for sale. The profits involved in fattening are considerably higher than those involved in raising an animal for its entire life-cycle and selling before it has been primed for the market. For this reason, the state, research institutions and NGOs have focused on promoting short-cycle ruminants in the area. Most informants considered the state priorities in the groundnut basin, the focus on fattening and short-cycle production, as appropriate and promising. The director of the laboratory at Hann noted that work needed to be done disseminating technical information to facilitate the integration of agricultural and livestock production.

Agro-pastoralists and pastoralists involved in small ruminant production produce primarily for the holiday market in Senegal. The demand for small ruminants on Eid al-Kabir, or Tabaski as it is known in Senegal, is enormous. Senegalese producers have a hard time meeting the demand. The state, to avoid consumer unrest, encourages regional producers to bring sheep to Dakar. Senegalese livestock producers complain that this practice leaves them with unsold sheep at the end of the season. This provides little incentive for them to increase production. They argue that the state should retain normal import standards and controls even during the period of Tabaski. If this results in a shortage, it will drive up prices, encouraging producers to produce more sheep the following season. Each year the state makes some moves toward this policy, but at the last minute facilitates imports. With the implementation of the West African Monetary Union (UMOA), it is unlikely that Senegal will be able to construct trade barriers to the flow of regionally produced sheep. In addition, Senegal's regulatory enforcement agencies do not have the capacity to close the borders to all sheep importation.

At present there does not seem to be a great amount of commercial or private interest in the meat sector. While the Mouride brotherhood has been offered pastoral land, they have not shown interest in diversifying into cattle ranching or livestock production. As one observer agued, this may stem from the fact that the form of episodic free labor that marabouts receive is not appropriate for livestock production, which requires daily care and expertise. In the private sector, the disarray of the meat sector provides no regulatory framework to assure investments. The slaughterhouse would require that private investors make large investments to improve its dismal state, investments that are not sure to pay off in the long-run.

The Dairy Sector

Senegal's dairy sector is dominated by imported milk powder from Europe. The amount of imported milk has been on the rise since the 1980s, reaching its peak in 1993. Imported milk products cover over half of Senegal's milk consumption. In 1994 with the devaluation of the CFA, imports fell by approximately half, but the quantity of imports has been on the rise since. Per capita milk consumption is quite low in Senegal at present, 27 liters per capita per year. This is 13 liters less than the 1993 per capita level and four times less than WHO minimum recommendations (Ba 2003).

The Senegalese population consumes milk in predominately two forms: powdered milk that is added to hot water and lait caillé (similar to yogurt). Only middle- to high-income urban populations or producers themselves consume fresh milk frequently. Powdered milk constitutes one of the fundamental parts of the urban diet. It is purchased in individual serving size quantities that are packaged either by the local boutique owner or by the industrial distributor. These individual sized servings permit even the poorest family to purchase milk for breakfast. Powdered milk is also mixed with local cereals for dinner. In rural areas, powdered milk is less common, but present nonetheless. The quality of the powdered milk sold in Senegal has recently come under debate as industrial producers have begun adding non-animal fats to the powdered milk.

The market for lait caillé is extremely large in both rural and urban Senegal. It is an essential part of most Senegalese diets. In particular, it is consumed with local cereals for dinner by almost all Senegalese at least once a week and the poorer population on multiple nights of the week. It is also the traditional meal for certain family occasions, such as baptisms. Lait caillé can be made with either fresh, local milk or powdered milk. It is often the preferred means of selling dairy products for producers because it can be preserved longer than fresh milk.

There are four primary forms of dairy processing and distribution in Senegal; each corresponds to its own set of stakeholders, difficulties, and interests.

Traditional Production and Distribution Systems

The first, and most important for improving poor producers' livelihoods is the traditional form of processing and distribution. This system involves a number of actors in the production and sale of milk and lait caillé. The most numerous producers in this system are pastoralists of Peul origin. For this population, milk is generally consumed and sold for everyday needs. While milk is not necessarily the most valued aspect of the cow, it is in many respects the most important for daily survival needs. Generally, it is the wife of the herder who is responsible for collecting and selling the milk. Often, she is responsible for one or two cows which are kept near the living area and used for daily milk supplies. The pastoralist system accounts for 38% of the national supply of fresh milk (Ba 2003). In the groundnut basin and south of the country, agropastoral production, based on mixed production of livestock and agriculture, furnishes 61% of the national supply of fresh milk (Ba 2003). This milk is supplied either through traditional distribution networks or new regional collection and distribution networks in around Senegal's secondary cities (these networks will be addressed below). Their cows are generally kept in one area and receive more feed, thus having a higher milk production capacity.

In the traditional system, the wives of livestock producers or other local women either sell the fresh milk at local markets or transport it to women who will sell the milk either in a door-to-door fashion or take it to other markets. In the evening the women return to collect their profits. These second-degree resellers often accumulate a large quantity of milk, which they can then supply to mobile saleswomen who will transport it to more attractive markets the next day after having transformed it into lait caillé. They often target government workplaces, large enterprises, banks and well-off neighborhoods for sale. This system of processing is most common in the interior regions, but also plays an important part in supplying the Dakar market.

Those implicated in the traditional production and distribution system face a number of impediments to increasing profits. While there is significant positive interaction between the actors of this system, and most transactions are based upon credit, the traditional system is largely individual and isolated. Each actor looks primarily to increase his or her own profits and rarely is concerned about the system as a whole. The system continues to function because of existing social networks and obligations. Perhaps for this reason, the system is marked by small systems of interaction, but lacks any type of large network for distribution.

The low productivity of the local cattle races and the competition between human and calf consumption pose a second problem for increasing milk profits. This problem is particularly important in the sylvo-pastoral zones. The local races can produce between 1 and 30 liters of milk per day, with large variances between the dry season and rainy season. The calf consumes approximately 50% of the milk produced generally. The producer's family for daily nutrition also consumes a large part of the cow's milk. The ability for the family to actually sell milk and the quantity for sale depends upon the nutritional needs of the family, the health of the calves, and the state of the cows' health, although the need for cash may sometimes trump these considerations. The milk sector has a very strong seasonal aspect, with the market being nearly empty during the dry months and being flooded during the rainy season (Broutin et al. 2000). One of the primary reasons for the limited milk production of the sylvo-pastoral zone at present is the lack of stable feed supply. In the agro-pastoral zone where feed is more easily accessible, milk production is generally higher.

Across Senegal's interior, particularly in the sylvo-pastoral zone, the distance between the producer and market poses serious problems for the sale of milk. The facilities do not exist to conserve milk in order to make the journey to Dakar or many of the secondary cities. Even in the form of lait caillé, milk cannot always be conserved for the necessary time to make it to Dakar. Roads are poor and refrigerated trucks few and far between. The difficult transportation conditions also raise the cost of milk to the consumer and reduce the profits to the producers. Even when small producers manage to get milk to an urban market often the facilities do not exist for sale. They are forced either to go door to door or to sell in kiosk located in suburbs rather than in the center of the city. For consumers to purchase fresh milk, they often have to go out of their way.

It is difficult to outline the exact interests of those within the traditional system, as they have no active interest group representation. They are fragmented and are not represented at the national level. Researchers and urban advocates offer the only point of reference for speculating on their interests. Producers and traders in the traditional system would likely benefit from private, NGO, or state investments in collection systems that operate on a local level. The key to the success of these collection systems for rural producers is the competitiveness of the prices offered, a point to which we will return when looking at other production systems. Rural producers and traders would also benefit from the dissemination of basic technology and training. Again private actors, NGOs or the state could fill this role. The *Group de recherche et d'échanges technologiques* (GRET) has projects in this area and is attempting to put out a good practices guide to achieve a sanitary baseline for all producers and traders. This would hopefully allow them to establish common standards and earn respect as a professional group. The lack of cohesion and professionalism amongst local milk producers makes them a non-existent interest group in the eyes of the state. They are unable to formulate or push demands at the policy-making level.

Peri-Urban Production

The second form of processing and distribution that has emerged in Senegal is peri-urban production around Senegal's secondary cities. The primary actors in this system are generally argo-pastoralist producers, milk collectors, processors, and NGOs or state enterprises. These actors work together to assure a system of regular milk collection to supply a processing and pasteurization center that then markets the milk products. Prices for milk are generally fixed and the producers are paid on a monthly or weekly basis. Unlike in the traditional system, male producers primarily supply these more organized systems of collection. Because there is more money to be made from this system and because it is often organized by outside actors who first contact male household members, women are often pushed out of this system. This can have serious consequences for household nutrition and survival, as women tend to be responsible for the daily supply of food for the household. It also undercuts the primary source of financial income and liberty that women have traditionally held.

These producers around the cities of Kolda and Tambacounda have stabilized much of their livestock and intensified production with the assistance of outside actors. The ISRA, the SODEFITEX cotton parastatal, and Vétérinaires Sans Frontières (VSF) have been the primary outside actors involved in production and distribution systems. NGOs and development organizations often help to assure a supply of inputs (veterinary service, feed, medicine, etc.) in exchange for producer agreement that they will sell to a selected processor rather than selling on the market themselves. In the case of SODEFITEX producer cooperation was assured by supplying inputs through the processor and having debts made and repaid at the processor level. They also provide technical and sanitary support to help assure the quality of the milk products that come out of the system. In all situations they play a primary structural support role, and in most cases, appear to be the key to the continued functioning of these collection and processing systems (Broutin et al. 2000).

The processors or pasteurizers generally operate under the supportive wing of the NGOs or development agencies mentioned above. They possess very rudimentary instruments and technology. They generally transform fresh milk into pasteurized milk, lait caillé with or without sugar, and butter oil (a long lasting cooking oil). These processors may have a difficult time getting significant quantities of milk, as they depend entirely on the network of milk suppliers within their system. As already mentioned milk production can be very low at certain times of year. In addition, they cannot be sure of the market demand for milk at a given time and will tend to purchase small quantities of milk to avoid having a surplus.

The tendency among processors to purchase only small quantities of milk from producers is one of the major difficulties of this type of system. Often it is difficult for producers to pay the debts that they have accumulated in feeding and caring for their cows. The prices offered by processors are generally lower than market price, and producers are tempted to sell on the market. The advantage to the systematic collection and processing system is that it is regularized throughout most of the year, it provides a product of quality, it helps to secure inputs, and it can help limit the time and distance involved in milk sale for many. These advantages have increased interest in the system in many areas, but the processors within the system cannot offer high prices for milk and cannot assure purchase of a given quantity.

Those involved in these systems of collection and distribution in the peri-urban areas around Senegal's secondary cities have a number of clear needs or interests. As in the case of traditional producers, the diffusion of basic technology and basic sanitary techniques is a starting point to develop the system. A set of standards or norms to which producers and processors could adhere to gain respect and recognition could help gain further clientele and push their interests in local level political circles. The need for organizational support from private, NGO, or state bodies is one of the key factors in the growth of systems of collection and processing. As multiple observers commented, the dairy sector cannot develop itself; it requires organizational support. The dispersed and individual nature of dairy production makes cooperation and network building almost impossible without organizational support.

Producers in the agro-pastoral zone could profit from genetic improvements to the local races of cow that would permit higher milk production. In other areas of Africa particularly Kenya, small-holder producers in agro-pastoral zones supply a large part of the domestic milk supply using crossbreed cows and gain significant profits from the sale of milk. The Senegalese administration is aware of the possibilities for milk production in the agro-pastoral zone and promotes crossbreeding in the area. In the long term, if Senegal's producers are to supply the milk market, genetic improvements must occur. Nonetheless, there are serious concerns that must be addressed before a widespread program of artificial insemination can benefit poor producers.

- Must have regular demand for milk. Increased milk production is of little good if the collection and distribution networks do not exist for the milk to reach the urban market. Supply focused development risks overrunning the very small local market for milk. Successful collection systems increase demand for milk on a regular basis encouraging producers to make investments in the care and improvement of their cows. Because of the highly variable nature of milk production by season, there must be a means of conserving, likely in powder form, the milk from the flush season to compensate for shortages in the dry season.

- Access to artificial insemination must be widespread and independent of political status. Up to this point, access to artificial insemination has been far too dependent on an individual's standing in the community and connections with the state. Only if artificial insemination is made available to all producers, even those with relatively few political connections or no leadership role, will the poor be able to benefit from the program. This may require that the technology be disseminated via non-state actors, and it will likely require that artificial insemination be available at a low cost to producers. One possible means of doing this is for collection systems to provide artificial insemination at subsidized prices in exchange for an agreement from producers to sell their milk into the collection system rather than on the market.

- Must take into account gender dynamics of milk production. Milk collection and sale has traditionally been women's main source of income. Male producers often push them out of the milk sector when it becomes more technically advanced, when more investments are made, and when profits are larger. Women need access to new technology as well, and they need secure control over productive cows. They must be incorporated into collection systems. Gender dynamics in Senegal make it doubtful that they can be equal partners in a collection or production system with men, therefore it might be more useful to look at possibilities for establishing female-run collection systems.

The viability of rural collection systems will likely depend in the long-run on their ability to be attractive both to consumers and producers. This means that the price discrepancies between local milk products and those made from powdered milk must be reduced somehow. Some price discrepancy may be acceptable, as consumers may accept to pay a higher price for higher quality fresh milk, but at present the discrepancy works against the purchase of local fresh milk. Several informants, even within the administration, argued that organizational support, diversification of products, and technological advances likely will not suffice to lower fresh milk prices to those of powdered milk. Powdered milk is extremely cheap, and most observers in the livestock sector believe this is the result of European subsidies on powdered milk exports. Senegal's powdered milk supply comes primarily from the European Union. The powdered milk is minimally taxed by the state. The state argues that it is an open, liberal economy and cannot impose tariffs on imports. Nonetheless, if the exceptionally low price of powdered milk imports is the result of unfair European subsidies in the sector, the Senegalese state is permitted under WTO rules and under the UMOA to impose tariffs. However, the state is unlikely to act upon this possibility. First, cheap milk imports benefit poor consumers who cannot afford local milk. Second, as will be addressed below, strong importer interest groups work against policy reform. The impetus to limit subsidies will most likely have to come from within Europe. Advocacy groups in Europe were quite effective at limiting beef dumping in West Africa. If similar interest were taken in the powdered milk industry, and if similar dumping-type practices were found, it might be possible for European advocacy groups to assist local Senegalese dairy producers.

Intensive Dairy Production

The third form of processing and distribution that we find in Senegal is intensive dairy production in the Dakar periphery. Private investors, mainly from Dakar, began intensive milk production using exotic races such as the Jersey, Montbéliarde and Holstein, in the 1980s. Three large farms dominated the intensive production system. The SOCA had some 500 cows and used modern technology to create pasteurized milk, lait caillé, and crème fraîche. The owner, Abib Thiam, was Prime Minister under Abdou Diouf. Two similar farms operate around Dakar. They sell their products either through a series of kiosks in Dakar's various neighborhoods or distribute to gas station mini-markets and/or grocery stores. There are also a series of small intensive farms, owned generally by well-off Dakarois with little experience in the sector. These entrepreneurs took advantage of the introduction of exotic races, under the support of state research institutions, to create farms. Private veterinarians also play an important role in the intensive production system. Exotic races generally require far more veterinary support than local races, and each farm works closely with veterinarians (Ba 2003 and Broutin et al. 2000).

The intensive farms face a number of limitations to increased profits and production. Using exotic races for milk production requires extensive inputs of feed and medicine. This drives up the production costs of milk products and sometimes the sale price a farmer can get is less than the total costs of production. Considering the extremely low cost for which consumers can purchase powdered milk products, producers cannot raise the price of fresh milk without risking the lose of sales. While producers generally are able to sell the entirety of their milk, sale requires significant displacement and effort on the part of the producer or resale agents. Transporting milk from Dakar's peri-urban area to the center of town is time consuming and costly.

Intensive producers have not organized as a group to push for their collective interests. Nonetheless, individual producers may be quite effective at using personal contacts or professional position in other areas to advance his or her own production needs. In particular, producers have been quite successful at soliciting research and veterinary assistance to increase milk production. For intensive producers, the development of high production races and technological advancement is important to their production methods.

Powdered Milk Import-Based Industry

Finally, the form of processing and distribution that is most consequential from a political and economic standpoint is the powdered milk import-based industry of

Dakar. Among this system's actors we can count, multinational enterprises, large national importers, smaller national importers, medium sized enterprises of processing, and neighborhood storeowners. Nestlé has been in operation in Senegal since 1961. The multinational corporation produces all of Senegal's concentrated milk from imported powdered milk. Concentrated milk made primarily from imported powdered milk from Europe, marketed under the name Gloria, is mixed with local cereals and rice for dinner and snacks. It is often mixed with or added to lait caillé. It is largely a luxury product, however, and consumption has fallen since 1994. Nestlé also sells Nestlé-Netherlands's Nido powdered milk in metallic cans of .4, .9, and 2.5 kgs and Nestlé-France's Gloria powdered milk in individual sized metallic sacks. Nestlé is the second largest importer of powdered milk in Dakar.

The largest importer of powdered milk products is the Senegalese company SATREC. Created in 1993, SATREC markets Irish powdered milk under the name of Vitalait. The milk is mixed with vegetable fats, vitamins, and flavoring before being sold in medium- and individual-sized metallic sacks. SATREC's milk appears very reasonably priced, but the quantity of milk per sack is quite small. SAPROLAIT is the oldest of Senegal's dairy businesses. It does not sell milk powder, but rather sells a variety of dairy products made from milk powder—yogurt, lait caillé, fromage blanc, and crème fraîche. They sell through supermarkets, gas station mini-markets, bulk retailers, hotels and restaurants (Broutin et al. 2000).

In addition to these three dominant industrial enterprises, there are some 50 other importers. These importers are composed of bulk retailers and medium-sized enterprises. The bulk retailers generally set up business in the center of Dakar and sell to smaller bulk retailers who then sell to small storeowners. These small store owners than divide the powdered milk into small, individual sized sacks for resale or use the powdered milk to make lait caillé for sale at their store. The medium-sized enterprises involved in powdered milk processing are one of the more interesting developments in Senegal's dairy scene at present. These enterprises transform powdered milk primarily into lait caillé which is packaged in either plastic sacks or containers with attractive labeling and apparently high sanitary standards. These products appeal primarily to medium- to high-income Senegalese, as they are more expensive than store-made lait caillé. These medium-sized enterprises are financed by Senegalese capital and appear to be doing quite well on the market.

Those involved in the importation and processing of milk powder do not seem to face many difficulties in securing profits. With the 1994 devaluation, importers saw powdered milk consumption plummet, but most were able to overcome this fallback. Either by reducing the amount of milk in individual sized sacks of powdered milk, by diversifying production, or cutting back temporarily on production, they were able to remain competitive. Industrial producers face little in the way of tariff barriers. The customs tax on powdered milk destined for industrial processing is only 5%, and no value added tax is charged. If the powdered milk is not intended for industrial processing, the tax is approximately 25%. Bulk retailers may have a harder time making powdered milk profitable with these tax levels.

While milk powder importers may not have many new needs to push for in policy-making, they have a number of interests to defend. Their monopoly on the market depends greatly on keeping taxation at minimal levels. If taxation were increased, they might lose their competitive edge. As most Senegalese believe fresh milk to be of higher quality, one can presume that it is price that is driving their consumption choices. Importers have a strong interest in keeping up profits through the importation of cheap powdered milk and the development of a local milk industry, while perhaps not threatening at present, is of no particular interest. With powdered milk available so cheaply on the international market, they have little incentive to invest in local milk production or distribution systems. Nestlé operates a program of local milk collection in the Ferlo. The prices offered producers are low, the quantity collected small, and the project appears to be failing. It seems that Nestlé considers the project largely a public relations move and not a serious business venture.

Powdered milk importers are well-positioned to defend their interests. They are relatively few in number and seek similar policies, and so face little collective action problems in organizing to push through certain policies. They also constitute a driving force in Senegal's economy. These are some of the largest businesses in Senegal, and they are large employers in the Dakar region. When the state threatens to increase taxes on importations, industrial importers threaten to lay off employees. Worried about the response of the urban employees, the state generally backs off on the proposal. Furthermore, powdered milk importers are positioned to benefit from European subsidies in the dairy sector, for they are able to achieve higher profit margins when powdered milk is available at subsidized prices. Interestingly, their interests may be more in line with producers seeking state support in Europe than with local producers seeking state support.

The position of the Senegalese state on the dairy industry remains rather ambiguous. The powdered milk bill for the Senegalese economy is approximately 25-30 billion FCFA per year. This represents a large drain on Senegal's economy through increased trade deficits, in particular when it is coupled with huge amounts spent on rice imports each year. But while the import bill weighs heavily on the national economy, the state itself profits from taxation on milk imports. If one considers that the state receives from 5% to 25% of the cost of imported milk products, the motivation for the party in power to continue this importation is evident. Reducing imports would lead to immediate revenue reduction. Furthermore, the Senegalese state is under pressure by urban consumers to keep food prices low. The Dakarois consumer has difficulties affording powdered milk as it is. Taxes that raised the prices, even if undertaken with good intentions, would be resisted by consumers. Considering the political weight and economic import of importers, the desires of consumers, and the revenue made off milk imports, it is highly unlikely that imports will be stopped or taxes significantly increased any time soon.

At first glance the future of the Senegalese dairy industry appears quite bleak for rural producers. Local production is not competitive in most areas. The lack of infrastructure and regularized collection systems means that milk cannot easily reach consumers. The state does not have the funds to improve collection, pasteurization, and distribution systems. The private sector has not shown great interest in investing beyond the region of Dakar. Milk importers and Dakar consumers are well-positioned to keep the powdered milk industry dominant, whereas rural poor have no organizational experience in the milk sector. Nonetheless, the dairy industry is the one area where progress could make significant difference in rural livelihoods, in the health of the Senegalese population, and in macro-economic development, and as such it should be a loci of attention for NGOs and donors. Certain strategic points of entry can be clearly identified:

- Collection Systems: Structural support from non-governmental organizations and donors *can make a difference* at the local level. Supporting and facilitating collection systems in rural areas around Senegal's secondary cities has been shown to help rural producers reach urban markets and secure some profits from milk production.

- "Branding" Local Milk Products: C. Broutain of GRET puts forward a sensible and plausible means of raising the competitively of local milk products. She argues that much of Senegal's middle- and upper-income population is willing to pay slightly higher prices for milk products from fresh milk. Fresh milk has the distinct advantage of having a reputation for tastiness and nutrition. Senegalese producers need to be able to take advantage of the higher value accorded to fresh milk. Currently this is limited by misleading advertising on the part of those marketing powdered-milk based products. Certain consumers believe they are purchasing local milk-products when in actuality the product is made from powdered milk. If labelling were regulated or if a means of "branding" local milk products was developed that would allow consumers to make an educated decision about the milk products they were buying, local milk products could gain a competitive edge because of the nutrition and quality values associated with them. This labelling, branding or certification does not necessarily have to be undertaken by the state; respected non-governmental organizations, donor organizations, or religious organizations might, for example, develop a system of certifying and labelling local products.

One final debate must be addressed in examining the dairy sector. Intensive milk producers in Dakar's periphery are better situated to advocate for their interests than the dispersed, small-scale milk producers of Senegal's interior. But in advocating pro-poor policies, the question arises: are intensive producers' interests favorable to poor producers' interests? On the one hand, as many observers argued, the two groups are not in direct conflict. The intensive producers are primarily interested in the Dakar market, and they are competing with importers. Rural producers are largely targeting the peri-urban markets of secondary cities. Furthermore, both types of producers share a common interest in becoming competitive against imported milk products. Yet, other informants worried about conflicts of interests between the two producer groups. Intensive production is input intensive and expensive. If the state places the resources allocated to the dairy sector into this type of production, it may miss the needs of poor producers. Poor producers require basic forms of processing, basic medical and feed inputs. For rural producers, achieving maximum outputs from local races may be more realistic as a first step to improving production than investing in genetic improvement. In addition, the type of genetic alterations advocated by intensive producers may prove too costly to maintain for poor producers. Senegalese intensive production has not proven to have a comparative advantage, due to the high costs of maintaining imported or genetically altered dairy cows. Rural dairy production requires fewer inputs, which may improve its competitive advantage. The location of rural production near Senegal's secondary cities may make it possible for local milk to supply the secondary cities. Intensive production in Dakar is not likely to be able to displace the powdered milk industry or supply the city in the near future. Attention and funds would be better used in supporting rural or low-intensity production than in supporting the high-cost, relatively inefficient intensive production around Dakar.

The Poultry Sector

The possibility for the poultry sector to play an important role in securing poor people's livelihoods in Senegal is definitely present. Poultry is an important source of revenue for women and children in both rural and peri-urban areas. Poultry production serves as a means of adding value to agricultural and household residues and can serve as "pocket money" to meet everyday expenses. The advantages of poultry production generally stem from the short production cycle and facility of sale (Ly 2003). When looking at the potential of the poultry sector for poverty alleviation, it is necessary to highlight that the sector is not monolithic. Two significantly different modes of production exist. Of the most significance for the poorest of Senegal's population is traditional poultry raising; yet, semi-industrial production garners the most discussion and attention at present. This is not surprising if we consider the facility of organization by smaller numbers of producers involved in semi-industrial production, their proximity to Dakar, their financial advantage, and often their higher level of education.

In many other parts of the world, agro-business has managed to almost entirely displace traditional production. There is no guarantee that this could not occur in Senegal. Nonetheless, observers generally argued that the poultry sector in Senegal need not develop into a situation of industrial dominance. Observers continually pointed to common interests between traditional and semi-industrial producers—eliminating disease, securing feed, and eliminating imports of chicken parts. Progress on these counts could improve the production of both farmyard chickens (*poulets de pays)* and industrially-produced broilers (*poulets de chair*) and hens (*pondeuses*). In addition, several observers pointed out that the women involved in poultry production in peri-urban Dakar are not all "wealthy" by any means. Observers argue the potential of the Senegalese market to absorb reasonably priced poultry is quite large. If imports were limited, the market would likely offer room for both farmyard chickens and broilers. Farmyard chickens occupy a specific market niche. Many consumers prefer the taste of farmyard chickens, and they are the only acceptable chicken for ritual-sacrifice or special occasions. Yet, despite these common interests, the reality is that intensive production largely benefits relatively well-off individuals in the peri-urban area of Dakar.

Poor producers face a number of constraints to increasing profits from poultry production. First, their poultry are highly susceptible to disease. In particular, Newcastle disease is responsible for 30 to 80% of all deaths (Ly 2003). A producer's entire stock of poultry can easily be wiped out by disease. This discourages serious investment in poultry production and encourages diversified investment in a number of moneymaking ventures. Considering that vaccines and feed can generally either be purchased only in large quantities or cost considerably more in small quantity, this makes it hard for poor producers to benefit from advances in medicine and increases in supply of industrial feed. Furthermore, traditional production is based on basic reproductive techniques involving local hens and cocks which limits reproductive performance. Poor households rarely have the material or techniques needed to sustain a large number of poultry. Their reliance on rudimentary feed from the fields or household makes it difficult to sustain a large number of poultry. While some poultry is sold, most is consumed within the household. Farmyard poultry is not particularly competitive. It is more expensive than semi-industrial poultry. It fills a niche market, but does not appeal to consumers on financial grounds.

The small amount of poultry that each poor producer actually sells, the enormous number of poor raising poultry, and the secondary nature of their involvement in the poultry market, all contribute to a serious collective action problem among poor rural producers. They do not have adequate incentives to organize as a group to further their demands for feed, medicine, or access to markets. Their geographical dispersion hinders communication and cooperation as a group. Furthermore, few rural poor would identify primarily as poultry producers.

Semi-industrial producers on the contrary have been quite effective in organizing to formulate demands of the state. With the *Centre National Avicole* (CNA) serving as organizational support, semi-industrial producers have formed a number of professional organizations that are extremely active in advocacy work and professional training. The semi-industrial landscape is quite different from the scene of traditional production, largely explaining the organizational discrepancies. Since the late 1980s, the semi-industrial sector has seen significant private investment by urban and peri-urban entrepreneurs, both female and male. Growth in the sector skyrocketed in the 90s with the support of the Projet de Développement des Espèces à Cycle court. Those who invested in semi-industrial production were generally from Dakar or the peri-urban farming zone of the Niayes. The size of the poultry farms varied significantly, but is generally between 200 and 10,000 chickens. Some producers raise laying hens while others focus on chickens for meat. These producers benefited from geographic proximity, limited numbers, institutional support, contact with the same suppliers, and previous professional and educational experience which gave them a step-up in organizing efforts. The *Fédération des Acteurs de la Filière Avicole* (FAFA) was created in 2002 to defend the interests of industrial poultry producers, increase professional solidarity, and create a forum for consultation within the sector. It has been extremely active in defending poultry producers' interests.

The difficulties which semi-industrial producers face correspond to some, though not all, of the difficulties facing poor producers. The FAFA argues that urgent measures must be taken to stop the importation of frozen chicken parts. Action must also be taken to secure the supply of reasonably priced feed for the poultry industry. Finally, advances must be made in the distribution of medical treatments for poultry diseases. These three issues come up again and again in interviews and documents on the poultry sector (Ly 2003; République du Sénégal… 2003).

Senegalese poultry producers, be they rural poor or peri-urban industrialists face stiff competition for the urban market. The importation of frozen chicken parts, in particular thighs and legs, has skyrocketed in recent years. Importation began when Senegal began to liberalize importations in the late 1980s. After concerns about meat dumping practices drove the state to raise taxes on imported meats, the quantity of imported chicken diminished sharply from 4,000 tons in 1987 to 580 tons in 1997. Between 1999 and 2000, the quantity of imported chicken increased 131% with the implementation of the Common Exterior Tariff of the West African Economic and Monetary Union (UEMOA) which lowered the taxes placed on imported chicken parts (Ly 2003). Today the quantity of imported frozen chicken continues to increase as various entrepreneurs look toward importation as a means of making easy-money.

The large-scale importation of frozen chicken parts has serious repercussions on the domestic poultry industry. Frozen chicken parts are sold for approximately 30% less than domestically-produced chicken. Considering the fixed input costs of semi-industrial production and the costs involved in transporting and raising traditionally-produced chicken, it is impossible at present for domestically-produced poultry to compete with imports. Most producers in Dakar, and the industries which produce feed and inputs, are operating at 1/3 to 2/3 capacity, because the demand for domestically-produced chicken is low.

Imported chicken is acquired at extremely low prices abroad. From the Senegalese perspective, it seems that the low prices stem from the low quality of the products. Most observers commented that the European or other producer recuperates the costs of production through the sale of the noble parts of the animal. The remainder of the bird can be sold at exceptionally low prices. Generally producers are looking more to get rid of the other parts than to make a large profit. In addition, the poultry which makes its way to Senegal often has been frozen for far too long to be marketable in its originating country. One horror story recounted in Dakar was the sale of 10-year-old Australian chicken on the Senegalese market. The low quality of the product means that imported chicken parts will continue to be less expensive than domestically produced poultry unless the legal and/or taxation conditions on importations are altered.

Semi-industrial and industrial poultry producers, and allies within the DIREL and veterinary circles, argue for increased controls on poultry imports using a number of arguments. From an economic point of view, the importation of poultry parts that can be sold at approximately 400FCFA in Dakar undermines all attempts at domestically producing meat for the local market. No producer in Senegal can compete with such prices. While the Senegalese government may feel itself obligated to respect WTO rules regarding trade and UEMOA tariffs, the government needs to inquire into whether trade in these particular frozen parts represents a case of dumping and/or unfair trading practices. The UEMOA does have clauses to allow the taxation of certain products to protect against unfair trading practices.

In addition to the economic dubiousness of these trade practices, the sanitary and health conditions of the trade in frozen chicken parts are dismal. As noted above, the age of the frozen chicken is rarely common knowledge, and consumers may not know how long the parts have been in storage. Furthermore, the fat content and cholesterol in the less desirable parts of the chicken are generally higher than in white meat. Most importantly however from a health and sanitary standpoint is the lack of enforcement of the cold chain. When the chicken parts arrive in the port, they are generally kept in freezers at the port, but the actual temperature in these freezers is subject to debate. Furthermore, once the chicken leaves these freezers, it is rarely kept in freezer temperatures, or even refrigerator temperatures. One importer stated that his company transports frozen chicken to the interior of the country in regular cars and trucks with no refrigeration. Furthermore, at the site of final sale, refrigeration is often interrupted by power outages. The FAFA and its allies have argued that the most effective means of limiting the importation of poultry products and/or raising the prices to reflect the real costs of production would be to enforce cold chain regulations. If importers were forced to keep chicken parts frozen at all times, their costs of importation and sale would rise dramatically. The cost of the chicken would necessarily go up and the profit margins would likely fall driving many of those searching for easy-money out of the market.

The DIREL is clear that it is within its jurisdiction as regulator of the sanitary conditions of meat sale to enforce the cold chain. Indeed in 2003, the Minister of Agriculture and Livestock essentially shutdown the sale of imported chicken parts by enforcing the cold chain. However this practice was unsustainable. Local producers had not been forewarned to increase production, which they have been reducing because of the stresses caused by massive imports, so there was a shortage on the market upsetting Dakar consumers. The costs and personnel needed to enforce the food chain went far beyond the capacity of the Ministry of Agriculture and Livestock. Importers reacted quickly, making their own demands on the state and politicians to re-establish the status quo.

Most of those involved in the importation of frozen chicken parts are commercial traders who take advantage of European contacts, contacts in the shipping industry, and some argue, contacts amongst customs agents and port employees to acquire cheap European chicken parts and ship them to Dakar for sale. Those involved in chicken importation have a certain power vis-à-vis the state because they are generally well-off traders involved in other areas of trade. Some are also Mouride traders with important ties to the brotherhood's leadership and ties to larger trade networks. Commenting on the source of importers political influence, observers pointed to their economic influence as large traders and to their social or political influence as important party members or politicians. As one observer commented, they are "gros bonnets".

The FAFA and their allies are organizationally strong. They are active and loud in voicing their complaints. They organized a march to draw attention to their cause and have released memoranda and action plans to the state. They are arguably one of the strongest producers' organizations in the livestock sector, but the influence they can wield in state decision-making is limited. The state is under pressure from urban consumers to keep food prices down, and chicken imports provide a cheap source of protein. The status quo keeps commercial traders content, an interest group which the state cannot ignore, and keeps the Dakar market stocked with cheap meat. Significant parallels can be drawn here with the triangle of importer interest group, Dakar consumer, and state revenue interactions. Dakar consumers thus far do not seem to have joined causes with the poultry producers. Nonetheless, if the health and sanitary problems associated with chicken imports gain enough press, consumers may begin to support local producers.

The poultry sector has difficulty acquiring reasonably priced feed. Senegal produces little corn locally, and the poultry sector is largely dependent upon corn imports for industrial poultry production. While feed can be made from local crops, groundnut, cotton, rice, fish, and phosphates, knowledge about processing methods is limited. The vast majority of the feed used in industrial production comes from corn. Corn is expensive, however, when compared to other inputs. Part of this price stems from high value added taxes on agricultural inputs. The FAFA was recently able to negotiate a reduction in value-added taxes on feed inputs and chicks; this may help to reduce production costs for industrial producers. For the poor, the emphasis should be less on acquiring corn feed and more on disseminating information on the processing of local products into chicken feed. Also, access to local agricultural residues needs to be assured. Finally, from a veterinary standpoint Newcastle disease must be dealt with on the national level. The state has undertaken a vaccination campaign, but rural producers have profited less than peri-urban producers. A nation-wide system of distribution is an urgent necessity.

The Senegalese poultry sector is in some ways well-situated to improve poor producers livelihoods and combat poverty. It has a strong domestic capacity to produce chicks and eggs and Senegal has a large market for poultry. Poultry production is practiced widely across households and is advanced by an active, well-organized interest group. Still the sector faces serious constraints that limit the range of pro-poor policies which may be implemented:

- Importation of cheap, low quality frozen poultry: The strength and political weight of importers and the consumer demand for cheap protein makes policy reform in this area extremely difficult. In addition, because of its involvement in the UEMOA, Senegal will have difficulty implementing tariffs or import barriers to frozen chicken parts, even if this trade is unfair by World Trade Organization standards, which has not yet been proven. Nonetheless, some progress is possible on this count. First, improving the capacity of the administration, particularly those bodies interested in doing so such as the DIREL, to control the cold chain is one means of limiting imports indirectly. Second, assisting producers in their attempt to educate the public on the health risks of frozen chicken parts and the nutritional benefits of local poultry may help to encourage consumption of local poultry.

- High-priced corn feed and lack of knowledge among producers about the process of transforming local crops into high quality feed: Again Senegal's participation in the UEMOA makes it difficult to change tariff levels on corn, although progress has been made on this count. Research and education on the process of transforming local grains into high-quality feed could help producers to produce at less cost.

- Large losses due to Newcastle and other diseases: Financial and infrastructure constraints make a nation-wide distribution system difficult to implement, but with adequate support such a system could perhaps be put in place.

- Lack of appropriate credit for those wishing to expand production: Producers often complained that credit was either not available or insufficient to expand production. A policy that focused on providing appropriate credit might help women and other producers to expand production and would likely face few opposing interest groups.

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