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Building a Better Livestock Market in Benin and a Safer, More Reliable Food Supply

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Abstract

The Nikki Regional Livestock Cooperative (UCOPER-Nikki) was concerned when Benin's national government made local authorities responsible for livestock markets. They knew that improved markets and infrastructure were essential to their economic future and a reliable, safe livestock/meat supply for customers locally and in southern Benin, Nigeria and Togo. A cooperative managed market was proposed in partnership with local government. Three years later the market is a reality. Total sales in 2011-13 approached \$10 million USD, and the market is more profitable for producers, with positive impacts along the value chain including feed and animal health, livestock trade and processing, retailers and consumers.

Keywords: African agribusiness, livestock marketing, value chains, regional trade, private-public partnerships, cooperatives, producer self-managed livestock markets

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Introduction

Boubacar M. Djaouga, DVM the president of the Nikki Regional Livestock Cooperative (UCOPER-Nikki or the Cooperative) and his 72 cattle producer group members were concerned when Benin's national government approved decentralization laws that shifted responsibility for the country's livestock markets to local government authorities.¹ They knew that improved markets and infrastructure were essential to their economic future. They saw potential benefits of a more reliable, safe livestock/meat supply for their customers locally and in southern Benin, Nigeria and Togo. They also knew that in some areas municipal governments had decided to take over the markets as a way to collect tax revenues with few benefits to producers. The cooperative proposed a partnership with the local government whereby the Cooperative would develop and manage a livestock market, and share tax revenue with the local administration.

Almost three years later the market is a reality. Livestock sales have grown to exceed \$5 million annually, and are more profitable for producers. Benefits are seen along the value chain with improving access to animal health services and products, better access to feed and water, more humane and efficient livestock handling and trade. The growing market center has resulted in the launch of a new dairy processing project by some cooperative members and consideration of a number of other options to improve livestock and meat sales. The retail sector is also seeing new growth, in areas ranging from animal health products and animal feed, to consumer products. This includes sales of food, clothing, household goods, motor cycles and even electrical generators. Producers, local businesses, customers and the local government are all very happy with progress to date, and others are trying to replicate the project.

Company Background

Livestock and meat subsector development is increasingly seen as essential to meeting growing demand for meat and dairy products in Sub-Saharan Africa. However, across much of the continent, agribusiness development faces a variety of challenges. Many successful efforts to expand production rely on external and large scale investment, leaving initiatives that offer potential opportunities for small and medium scale farmers and livestock producers more limited (Newman 2009, World Bank 2011).

In parts of West Africa cattle raising and herding has traditionally been a migratory (transhumant) activity especially linked to the Peulh or Fulani ethnic group. Over time, more production has become anchored in specific locations. The latter is the case in Northern Benin, around the growing urban center of Nikki. As a result, the area has become a source of livestock and dairy products, not only for the local region, but for traders who purchase livestock that are then shipped toward the central and coastal regions of Benin, including the economic capital, Cotonou, and to neighboring Nigeria and Togo.

¹ Leadership of the Cooperative is elected by the members. Both Dr. Djaouga, the President and Mr. Saïdou Saadou the Secretary General are medium to large cattle breeders in the local context with 50-100 breeding cattle each. They are also members of the Fulani ethnic group, and formally educated, which facilitates their interaction with local officials. Dr. Djaouga also provides veterinary advice to other producers and is an elected member of the local Municipal Council.



Nikki Livestock Market
Source. usadf.gov

Figure 1. Nikki (Red arrow) in Northern Benin is important in West Africa livestock trade
Source. http://www.lib.utexas.edu/maps/africa/benin_pol_2007.jpg

Growth Prospects for African Livestock, Meat and Dairy Demand

Africa is home to 240 million head of cattle, 16% of the global total, about the same as Brazil and India. Total livestock and meat demand are expected to grow faster in Africa than in other world regions over the next 20-30 years, according to Morgan et al. 2013. Africa accounted for 15.5% of the world’s population and only 4.3% of meat consumption in 2005-07. With 2.8% annual growth meat demand is forecast to increase from 11 million metric tons (mmt) to 35 mmt by 2050, making Africa the world’s second fastest growing meat market.

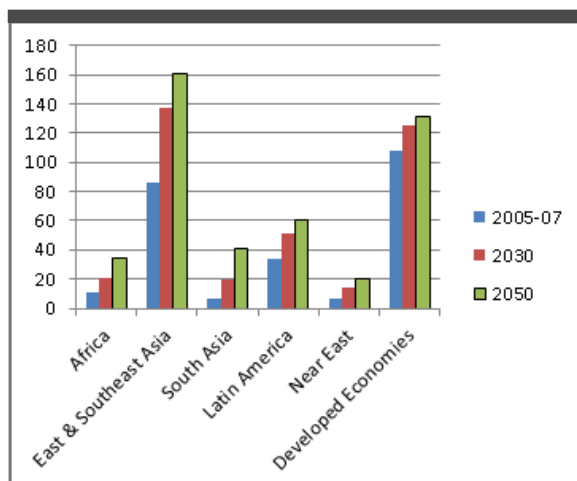


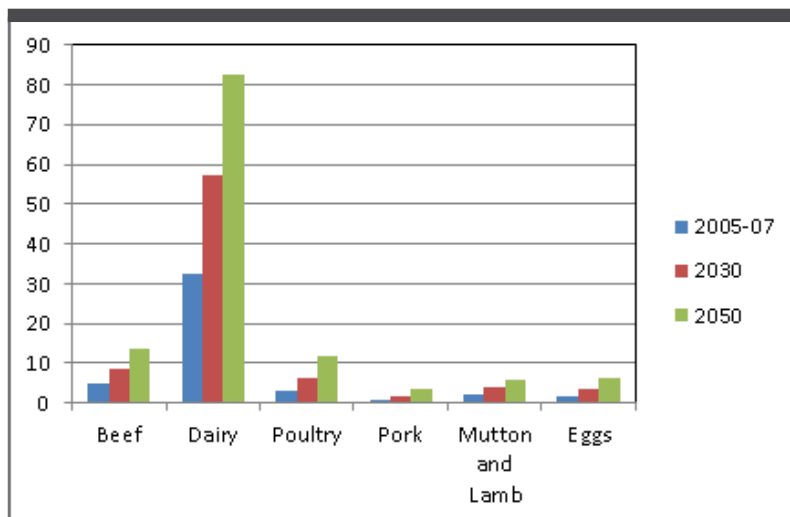
Figure 2. Regional Meat Demand Forecast to 2050

Table 1. Regional Meat Demand Forecast - Estimated Consumption, million metric tons (MMT)

Region	2005 – 2007	2030	2050
Africa	10.5	20.8	34.8
East & Southeast Asia	86.6	137.4	160.3
South Asia	6.7	19.5	40.4
Latin America	33.9	50.9	60.6
Near East	7.1	14.1	20.2
Developed Economies	108	124.8	131.5

Source. Morgan et al. 2013 based on FAO

Dairy and beef consumption are expected to see the fastest demand growth in Africa, followed by poultry. By 2050, the region is forecast to consume an additional 50.2 mmt of dairy products and 8.9 mmt each of beef and poultry meat annually. The combined value of beef and dairy markets in Africa is forecast to grow from \$33.2 billion in 2005-07 to \$90.1 billion by 2050. West Africa accounted for 16.2% of the total in 2005-07.

**Figure 3.** African Animal Products Demand Forecast**Table 2.** African Animal Products Demand Forecast - Estimated Consumption, MMT

Product	2005 – 2007	2030	2050
Beef	4.7	8.6	13.6
Dairy	32.4	57.2	82.6
Poultry	2.9	6.5	11.8
Pork	0.8	1.9	3.5
Mutton and Lamb	2.2	3.9	6.0
Eggs	1.6	3.6	6.1

Source. Morgan et al. 2013 based on FAO

Production of livestock, meat and dairy products has not been keeping up with demand. Imports already account for 10% of beef supplies and about 12% of milk supplies. This means that there will be significant business opportunities in meat and dairy markets, and effective initiatives to help increase local supplies will be critical. The UCOPER-Nikki case reveals some of the opportunities that exist in local livestock production and how

producer cooperative self-managed markets can play an important role in meeting this growing demand. It is especially interesting because it includes improvements in market outlets for small and medium sized producers, and is facilitating local and regional trade. As such it represents an example of commercial agribusiness development that is contributing to more efficient markets, and at the same time increasing producer incomes, contributing to local economic growth and poverty reduction, with regional benefits for Benin and neighboring countries. It also provides a useful model of how small scale financial assistance can help overcome a number of constraints to agribusiness development, increasing the likelihood that future expansion can become self-sustaining, and more attractive for commercial financing.

Management Structure

Producer Cooperative self-managed livestock markets are a relatively recent complement to traditional informal livestock markets in Benin. They take place one day each week, providing a central location for livestock transactions, while also playing a growing social and economic role in the community. Participants in the markets include livestock producers, including sedentary farmers who raise livestock and migratory (transhumant) livestock producers, livestock merchants, butchers and traditional broker/intermediaries. In traditional market arrangements, traditional brokers visit producers in their rural camps and villages, purchase livestock from producers, often on credit, and bring them to markets where animals are resold to itinerant livestock merchants. Brokers also collect a livestock tax from buyers and sellers.

Under the self-managed market system, a producer cooperative establishes a Market Management Committee (MMC) for the market. Sales are direct between the producer and the livestock merchant. The traditional brokers continue to facilitate transactions, but are paid a commission as “witnesses” and market tax collectors under the supervision of the MMC. One important difference is that transparency in pricing has been improved and producers report receiving a larger share of the sale price. Brokers obtain smaller margins, but at least for some, their income has reportedly been maintained because of increased transaction volume.

The Nikki Regional Livestock Cooperative (UCOPER) brings together seven smaller sub-regional livestock cooperatives with 65 local ruminant livestock cooperative groups at the township or *arrondissement* level. UCOPER- Nikki is in turn a member of a State or Department level cooperative group for the Borgou/Alibori.

The Nikki Self-Managed Livestock Market is operated by a Market Management Committee (MMC – or *Association Locale de Gestion du Marche de Nikki* – ALGMB in French) overseen by a steering committee of the officers of the Regional Cooperative. The MMC (ALGMB) in turn has officers, a Board of Directors (Assemblée Générale), a Management Committee (Comité de Gestion) and an Audit Committee (Comité de Contrôle). Membership is selected for renewable terms of five years, but the Board has the power to replace management and audit committee members in exceptional cases, such as perceived management deficiencies.

The market is financed by a transaction tax of 2,000 FCFA per bovine animal sold (West African CFA francs (FCFA or XOF) - about \$ 4.40 based on a three year average exchange rate of 450 FCFA = \$1 (USD). In May 2014 the exchange rate was about FCFA 480= \$1). There is a 200 FCFA per head tax for sales of small ruminants (sheep and goats). Half is paid by the buyer and half by the seller. The transaction tax revenue is used to pay the various staff of the market and the management committee, and for a variety of other initiatives of the Cooperative discussed below. Beginning in 2014, 35% of the revenue will be provided to the local government and 25% will go to the regional cooperative, with the remaining 40% retained by the MMC for operations and salaries.

Two important challenges to more effective markets have been physical infrastructure and staff training. While in other parts of the world, commercial financing might be available; this has not been the case in Northern Benin. Dr. Djaouga and his Board heard that the U.S. African Development Foundation (USADF) had provided support for improvements at another livestock market in a neighboring region, and approached USADF’s Country Coordinator (disclosure: the first author) with a proposal for improvements and training to help establish and develop the new Nikki livestock market.

In July 2011, UCOPER Nikki and USADF signed a grant agreement for USADF to provide \$149,000 in financing for market infrastructure improvements and capacity building training. Infrastructure improvements included a large (1.5 ha) fenced area, a well, watering troughs, and a loading dock to provide for more secure and safe livestock handling and transactions; store rooms to facilitate sales and storage of veterinary products and animal feed ingredients; an office and computer system to improve market management and sales tracking and reporting; and two covered areas to protect market participants from the elements and to serve as meeting areas.

Training support has included market business management, general accounting, financial management and internal controls; physical market management including hygiene and waste management; cooperative management and arbitration/conflict resolution; basic French language for cost accounting since participants speak several different local dialects and an exchange visit to another successful livestock market.

Sellers and Buyers

The average number of sellers at the market each market day has increased from 54 in 2011 to 79 in 2013, up 46%. Most sellers are from the municipality of Nikki and surrounding areas. Some migratory livestock producers from Niger and Burkina Faso sell livestock through the market, working with others from their countries who have settled in the Nikki area.

Buyers include butchers, traders and farmers purchasing cattle for animal traction. The average number of buyers per market day increased from 108 in 2011 to 177 in 2013, up 64%. Buyers are from the Nikki municipality and surrounding areas. Some buyers come from as far as Parakou (57 miles) and Cotonou (263 miles). The market draws significant numbers of buyers from Nigeria, as Nikki is close to the border. Nigerian buyers are reported to come from Saki, Illesha and Okuta (100 miles). Occasional buyers come from Togo.

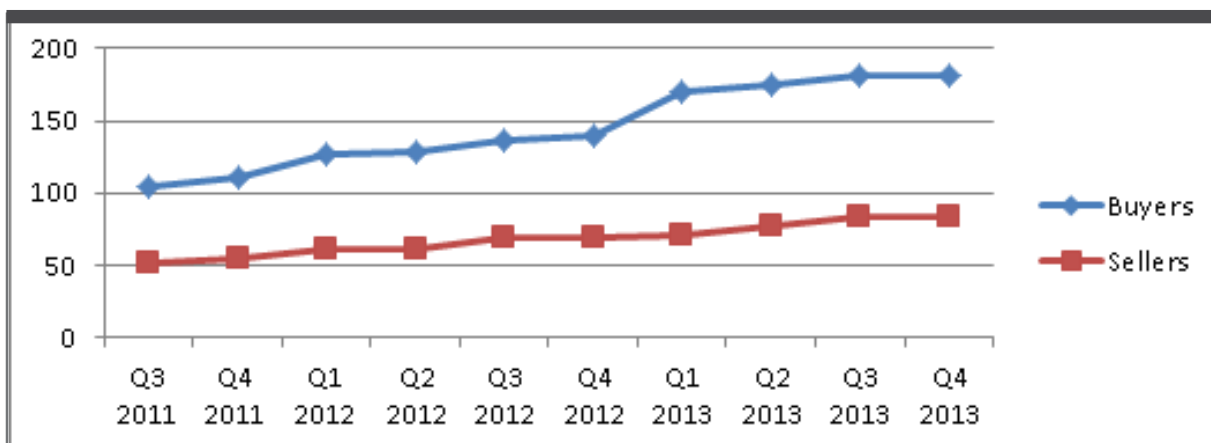


Figure 4. Evolution of Numbers of Buyers and Sellers Attending Nikki Market, 2011-2013

Source. UCOPER- Nikki data

Table 3. Evolution of Numbers of Buyers and Sellers Attending Nikki Market, 2011 - 2013

Average Numbers Per Market Day	Q3 2011	Q4 2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013
Buyers	105	110	126	128	137	140	170	175	182	182
Sellers	52	55	61	61	69	69	70	77	84	84

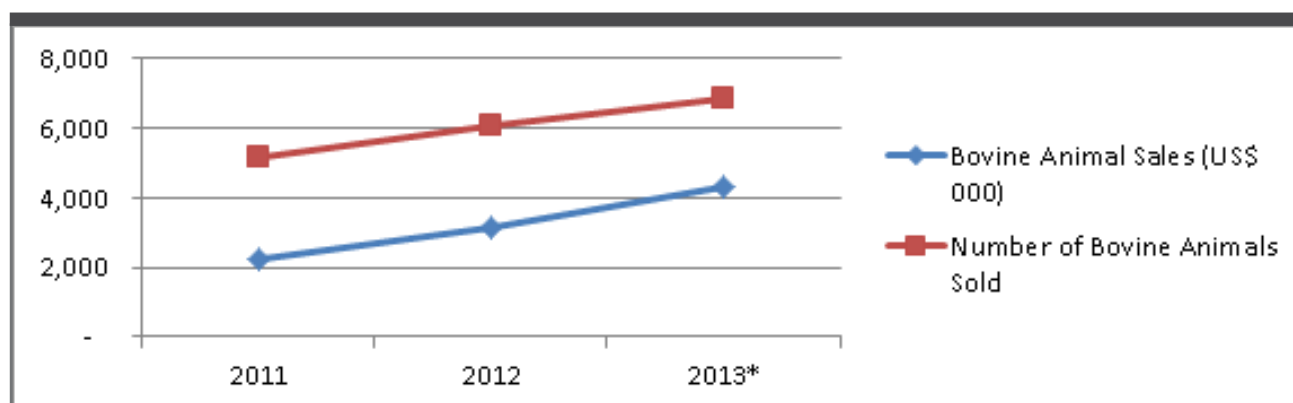
Source. UCOPER-Nikki data

Key Success Factors

During 2011-2013, more than 18,000 bovine animals (cattle) have been sold in the Nikki market, with the number of animals sold annually up 33% since 2011. As seen in Table 4, the total value of cattle sold in the market during the three year period was \$9.7 million. The value of sales almost doubled between 2011 and 2013, approaching \$5 million when cattle, sheep and goats sales are included. The average per head sales price for cattle increased 44% due to a more competitive market, improved animal quality and other factors.

Livestock market transaction fees or taxes have generated \$80,000 in revenue, with half going to the local government, and the balance to the MMC and the Cooperative. Sales of veterinary products at the market were valued at \$124,000 in 2013, up seven-fold since 2011. The MMC began to sell feed products in 2013, with sales valued at \$161,000.

This has made livestock production more profitable for producers, with impacts along the value chain including feed and animal health, livestock trade and processing, retailers and consumers. As Benin's per capita national income is only about \$1,570 according to the World Bank, these results are especially significant.

**Figure 5.** Evolution of Cattle Sales Volume and Value at Nikki Market, 2011-13

*Estimate based on 9 months data

Source. UCOPER-Nikki Reports

Table 4. UCOPER-Nikki Market - Reported Sales, 2011-13

Item	2011	2012	2013	Total 2011-13	2011-13 Pct Change
Cattle Sales (FCFA)	1,005,653,000	1,425,438,000	1,929,438,000	4,360,529,000	92%
Cattle Sales (US\$)	2,234,784	3,167,640	4,287,640	9,690,064	92%
Number of Cattle Sold	5,142	6,084	6,832	18,058	33%
Market Tax Collected (FCFA)	10,284,000	12,168,000	13,664,000	36,116,000	33%
Sales of Veterinary Products (FCFA)	4,968,795	10,875,450	40,159,000	56,003,245	708%
Sales of Animal Feeds (FCFA)	-	-	72,598,745	72,598,745	-
Average Bovine Animal Sales Value (US\$)	435	521	628	537	44%

Source. Based on surveys conducted among market participants

- Livestock producers indicate that market price transparency has been increased. More sales are on a cash basis, with fewer thefts. Access to animal health products and animal health are improving. Producers say that they are more likely to be paid at the time they deliver an animal. They also have improved confidence and understanding of marketing as a result of training and market visits.
- Survey findings from about one hundred livestock producers indicate that sales prices have averaged 25-35% higher than when they sold through the itinerant brokers who visited their camps. Furthermore, they are paid cash, while sales through brokers have often been on credit, with risk of non-payment (E. Newman and APIC 2013).
- UCOPER-Nikki reports that 98% of cattle now receive two key vaccinations as part of its work with breeders. Vaccinations and veterinary medications are being made available for sale by licensed veterinarians at the market. UCOPER-Nikki has also arranged for additional animal feeds, especially cottonseed cake to be available during the dry season. Producers were surveyed regarding their needs and sales were launched in 2013. This is contributing to improved livestock management, and healthier more valuable animals (UCOPER-Nikki).
- Butchers and Livestock Merchants report that they are able to make better use of their time because they no longer have to go from camp to camp looking for animals to purchase. Animals purchased in the market are in good health and inspected by a veterinarian. However, prices in the market are somewhat higher than when purchased in local camps.
- Some of the traditional livestock brokers, about 7 on an average market day, are now paid as witnesses for transactions in the market, receiving payment for services rendered from the MMC.
- The MMC also makes payments to traditional leaders who often play a role in resolving disputes that may arise during and after the market takes place. For example, in cases where livestock being sold are reported to have been stolen, or where livestock going to or from the market damage crops or property of farmers along their route.

Development of the livestock market is also resulting in a number of social investments that benefit the region. Many livestock herders belong to the minority Fulani ethnic group which traditionally provides only limited schooling for their children, in part because they often migrate with their livestock. With funds earned from the market UCOPER-Nikki has supported teachers to help create two primary schools in two camps, so that now 60 percent of the children in those camps are attending school. UCOPER – Nikki is also working with USADF to provide literacy training in the local language. More than 300 men and women have received literacy training.

Success from the Perspective of a GLIMPSE Framework

Connolly and Phillips-Connolly's GLIMPSE framework, provides a useful basis for looking at the challenges and opportunities that the Cooperative faces:

G - The National Government's decision to turn over responsibility for livestock markets to local government presented a threat to the usefulness of the local livestock market to producers. In some locations, the local administration's focus only on collecting tax revenue without ensuring adequate market infrastructure or transparency resulted in sharply reduced producer participation in markets (Onibon, 2004). The Cooperative – Government partnership in Nikki to develop and manage the market has resulted in growth beyond expectations. While half of the market tax revenue is retained by the cooperative to operate the market, the local government has actually seen an increase in revenue because of successful volume growth and increased tax collections. As a result, the local government has agreed to take only 35% of the transaction tax during 2014.

The local government initially agreed to a public-private partnership with the UCOPER in order to attract the market to Nikki. It then agreed to reduce its share of tax revenue retained based on the suggestion of UCOPER-Nikki and the MMC. Under the original market management agreement the local government was to use part of its tax revenue to support market infrastructure investments and repairs. These resources are now retained by UCOPER and the MMC. This will benefit the Cooperative because reportedly the municipality has not actually been providing support for infrastructure and repairs from its share of the tax revenues.

L - Losses in the supply chain. Evidence to date suggests that animal welfare in handling animals has been improved, with fewer injuries and economic losses as a result of improved handling of animals purchased at the market. Improved feed, watering and animal health services for animals before and after sale also add value.

I - Infrastructure improvements, including a fenced area to help prevent loss of animals, a deep well which assures reliable and adequate clean water for animals and humans, improved sanitation facilities, and improved loading facilities have all been beneficial to livestock, livestock producers and buyers and those who work in the market.

M - The Market offers producers additional transparency and liquidity, along with documented higher returns which provide an incentive to continue participating. For buyers, increased participation in the market by more producers offers additional assurance of reliable, cost competitive supplies.

P – Politics and Policies. Market development and management have been as successful as they have to date as a result of policies that appear to be working for all involved. As noted above, the situation that led the Cooperative to propose to develop and manage the market was a direct result of a challenge due to political decisions to decentralize responsibility for markets.

S - Science and Innovation. Increasing the share of local ruminants, including cattle, goats and some sheep, sold via the market, has resulted in opportunities to take a more scientific approach to animal health and disease management with veterinary inspections on-site, currently after sale. The Board realizes that there are some risks to allowing producers to bring animals into the market prior to health examinations, and is looking at ways to address this.

E - Environment. In developing the market, ensured availability of adequate water was one key to attracting market participants. The cooperative also provided training for staff members and some producers on environmental managements of wastes from the market. One idea being explored would involve development of a methane digester for market wastes.



Nikki Livestock Producers Cooperative Market Management Committee

Source. Eric Newman photo.

Strategic Issues – Looking Ahead

The challenge for the Cooperative is to decide on a five year plan, including priorities for their own growth and ways to finance it. Cooperative members need to assess potential advantages and disadvantages of a number of options that have been suggested and/or tried as pilot efforts and could be expanded, including the following:

The market is held on a weekly basis. Traditionally, traders traveled to livestock producer villages and camps to purchase animals, then resold the animals at village markets. Part of this market's success rests on having more buyers and sellers, and a more transparent and liquid market. Yet, animals are brought from some distance. To avoid situations where prices fall because there are fewer buyers than sellers, the Cooperative has launched a small initiative to purchase animals and hold them until the next week's market.

- Buyers and sellers come from fairly long distances and the town of Nikki lacks accommodations. Cooperative members have suggested building additional sanitary facilities including showers, and adding overnight accommodations so that buyers can stay in Nikki.
- Some of the members of the Cooperative have launched a dairy processing initiative in the town of Nikki, with pasteurized milk products available for the first time. The cooperative could encourage expansion of this and other potential efforts to add value to livestock and products locally and diversify market outlets.

- The market is in an area where there has been an abundance of trucks from Central and Southern Benin. These deliver goods to Northern Benin and return empty. Some merchants and truck drivers have taken advantage of this situation to purchase livestock in the Nikki market to ship to markets in Central and Southern Benin where prices are significantly higher, even considering the transportation costs. Some members of the Cooperative have suggested that the Cooperative take the initiative to purchase and market cattle in Central and Southern Benin markets on behalf of its members. As seen in Table 5, 2013 prices were about 18% higher further south in Parakou, and 42% higher at the coast in Cotonou. Because of backhaul opportunities, transportation costs about \$6 per animal for the 1.5 hour trip to Parakou and about \$12 for the 8 hour trip for live cattle shipped to Cotonou. Other costs would include feed, various taxes and risks.

Table 5. Potential Value Addition in Selling Beef Animals in Central or Southern Benin, 2013

Live Bovine Animal Prices	FCFA	US\$	US\$/kg	US\$/lb
Producer Price – Nikki	267,000	556	2.65	1.20
Delivered – Parakou	315,000	656	3.13	1.42
Delivered Cotonou	378,000	788	3.75	1.70

Source. Industry communication

- Animal health is an important concern. A number of animal diseases have been reported in Northern Benin in recent years. The market currently provides veterinary inspection of animals when they are sold, but some think that animals should have health inspections before they arrive in the market. Veterinary inspections are currently paid for by buyers and sellers once a sale has been agreed upon. If inspection is to take place before animals get to the market, there is a question of how it will be paid for. Some have suggested that the Cooperative should hire a veterinarian and collect payment once animals are sold.
- Nikki does not have a bank. This means that buyers and sellers must carry large amounts of cash before and after the market. There have been some cases of theft reported. The Cooperative would like to attract a commercial bank to locate in Nikki, at least for the day of the market.

Final Observations

As Dr. Djaouga and his members look back on the accomplishments of the last three years they are satisfied with their progress, and their ability to successfully navigate the shift toward cooperative market management as part of a private public partnership. However, they also have to consider how best to address opportunities and threats for the future.

They are especially proud that local government officials have decided to reduce the share of the livestock transaction fee or tax collected that will be retained by the local government, as this will allow them to invest more in the market and potential activities to make it more successful. One of their biggest challenges is how best to achieve balance as they plan for growth. Investments in the Nikki market can help to make it a more important market center, but may also leave them more vulnerable to a relatively limited set of customers.

Some of their members and the community would like to see them expand along the value chain, getting more involved in efforts to ensure stable prices by purchasing more unsold livestock, expanding into value added products and exploring the potential to sell livestock on behalf of the cooperative and its members in markets in Central and Southern Benin. Yet, their members are livestock producers. They have had the benefit of a USADF grant to help to begin this effort, and they now have a revenue stream that can help them expand for the future. How should they set priorities and make a plan for growth over the next five years?



Nikki Livestock Producers Cooperative Market

Source. Eric Newman photo

Finally, the Nikki market is already becoming relatively more important for international trade with neighboring countries by land. Transportation costs from international ports on the coast are relatively expensive, but as they consider the longer term, it would be useful for the cooperative to consider its international competitiveness, both as a potential exporter, and to be able to assess the prospects for competition from imports in the longer term.

The Nikki Livestock Producers case study provides a useful example of improvements in livestock marketing with valuable benefits for a range of stakeholder groups. USADF is supporting a similar initiative in Burkina Faso. Swiss and Dutch development organizations are supporting self-managed market development efforts in Benin, Burkina Faso and Cameroon. This has resulted in some groups visiting UCOPER- Nikki and its market. Lessons learned can also be considered in the broader context of research and analysis of livestock and meat marketing in West Africa, and efforts to improve it. For further reference see: Josserand and Sullivan 1979; Holtzman et al. 1991; Williams, Spycher and Okike – ILRI 2006; Kamuanga, et al. SWAC-OECD/ECOWAS 2008; World Bank 2011; and Morgan et al. 2013.

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