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PILOT PROJECT FOR  
FRUIT AND VEGETABLE MARKETING

DISPERSION OF WHOLESALAE  
TOMATO MARKETING  
IN N'DJAMENA

*submitted to:*  
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Chad

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The collection of statistical data were supervised by Mr. Alain Mbailassem, Team Chief of the ACDI Market Surveyors. Although this report contains only a small portion of the data collected by Mr. Mbakassem and his team, the data provide a highly reliable basis for many of the conclusions in the report. Mr. Mbakassem also accompanied the Peace Corps volunteers on many of their market visits and provided invaluable insights into the operation of the markets.

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## EXECUTIVE SUMMARY

The objective of this report is to determine the technical, economic and social feasibility of establishing or expanding tomato wholesale markets outside of the Central Market. In January and February information was collected from the following markets in N'Djamena: Central, Millet, Cholera, Dembe, Diguel, Farcha and Moursal. Statistical data were collected on prices, quantities and marketing costs. Retailers, commission agents and producer/traders were interviewed regarding the functioning of the present system. They were also questioned on their interest in establishing points of wholesale in markets other than the Central market and the conditions that would make it successful.

The problem of market inefficiencies investigated in this report begins in January when domestically grown tomatoes are being shipped only to the Central Market in N'Djamena, mainly from outlying areas just South of N'Djamena. Overall, this is a period of very significant tomato wholesaling activity: in the two months of January and February an estimated 1,500 metric tons of fresh tomatoes with a wholesale value of 65.5 million CFA (\$240 thousand) were wholesaled through the Central Market.

The issue of expanding wholesaling to various markets is valid as daily shipments are brought in by producer/traders who can make on-the-spot decisions about where to wholesale their tomatoes. There are no formal regulatory restriction that would reduce trader flexibility in choosing wholesale markets. All potential markets are easily accessible. In principle, traders have no objection to wholesaling outside of the Central Market if they receive good prices. There is also the possibility that in some markets producer/traders might be able to avoid the commission agent's selling fee.

Retailers say they would welcome tomato wholesaling in their markets if there were sufficient quantities arriving in a timely and predictable fashion and if the tomatoes were of good quality. Retailers would save on taxi costs to the Central Market and save on the cost of push-cart transportation to get their tomatoes from the Central Market to the other markets.

The main advantages of tomato wholesaling in the Central market are its accessibility in the center of the city, its large number of "resident" tomato retailers and the experienced and trusted commission agents. The two main disadvantages are over crowding and the distance to the other major retail markets. The overcrowding leads to problems of theft (covered by the confusion in the market area), and difficulty in negotiating a price that is fair to producer/trader and retailer alike. Another problem is the cost of transporting tomatoes wholesaled in the Central Market to distance retail markets. This may cost a retailer 200 CFA in taxi fares and 250 CFA for push-cart transport for the

case of tomatoes.

An analysis of the feasibility of tomato wholesaling system in N'Djamena shows the potential for expansion into the Cholera, Dembe and Diguel markets. The Cholera Market is a traditional wholesaling market for Karal producers and the construction of the hangar belonging to the Federation of Groupements insures that more tomato wholesaling will be done here by Karal producers.

The Millet market already has a limited, but functioning tomato wholesale market during the Karal season. However, because of its proximity to the Central market, changing the system already in place appears inappropriate. The retail demand at the Dembe market coupled with reduced marketing costs for retailers suggest that it would be feasible and economically advantageous to establish a wholesale market there. At the Diguel market, both retailers and producers could benefit from having a point of wholesale for tomatoes as a result of reduced transportation costs and saving on intermediary fees. Farcha and Moursal are small local markets whose extremely small size does not make it economically worth while for producers to use them as a wholesale point for tomatoes.

Retailers emphasize that the success of expanding tomato wholesaling in N'Djamena is contingent upon the timely supply of high quality tomatoes to the smaller markets. They are concerned that producer/traders will attempt to wholesale lower quality tomatoes to them. They also point out that regular supplies are essential and suggest that producer/traders establish scheduled deliveries.

In some of the markets it is likely that producers will have to assume responsibilities normally borne by the commission agents. If the producers are unable or unwilling to act as commission agents, then suitable commission agents must be found for each of the markets in question.

The 1992 Karal tomato harvest season, beginning in mid-March will provide the project an opportunity to test the concept of dispersing tomato wholesaling. After retail buying patterns have been established throughout the city, the project will attempt to introduce tomato wholesaling into the Dembe and Diguel markets and monitor the wholesaling in the Cholera Market.

## INTRODUCTION

This report is part the Pilot Project for Fruit and Vegetable Marketing work in identifying and evaluating the fresh produce market systems in N'Djamena. The wholesale marketing problem addressed here begins each year in January when 500 to 600 cases of tomatoes arrive daily in the Central Market and 200 to 300 cases left over from the previous day's arrivals are still waiting to be sold. This concentration of wholesale activity in only one market leads to a number of cost and pricing inefficiencies which could be reduced by dispersing the wholesale activities to other market centers in the city. The specific objective of this report is to determine the technical, economic and social feasibility of establishing or expanding tomato wholesale markets outside of the Central market.

The data collected and analyzed here refer specifically to the December, 1991 through February 1992 harvest period and should not be confused with the main Karal harvest period which begins in March. From December through February there are six major tomato producing areas. At this time, Karal supplies less than 10% of the total quantity to N'Djamena. However, by the end of March, Karal is expected to have about 90% of the market share. Although the production, harvesting and transport conditions in Karal differ from the other areas, the advantages and constraints for wholesaling in other markets in this earlier season will also apply to the later period when the tomatoes coming from Karal dominate the market .

Most of the information for this report was collected in January and February, 1992 through interviews with producer/traders bring tomatoes to the market, commission agents who negotiate prices, and retailers. The report includes as much objective and quantitative information as possible, but many of the judgements about the feasibility of expanding into other markets are based on discussions with the market participants.

The report is organized into two parts. The first part traces the movement of tomatoes from the field to the retailers stall. It describes the tomato wholesaling process currently in operation in the Central Market and addresses the rationale and problems of the current system. This background provides the foundation for the analysis and recommendations in the second part.

In the second part of the report, the Cholera, Millet, Dembe, Diguel, Farcha and Moursal markets are described and analyzed to determine the technical, economic and social feasibility of wholesaling tomatoes in each of them. The report then outlines some general conclusions concerning quality and quantity requirements of tomatoes for successful wholesaling. The report concludes with recommendations for implementation.

## THE STRUCTURE OF TOMATO MARKETING

### Producing Regions for the N'Djamena Fresh Market (December - February)

Fresh local tomatoes come into N'Djamena from six main growing regions; Karal, Dourbali, Bougmene, Miskine, Linia and Koundoul. All of these regions except Karal and Dourbali have access to irrigation which enables them to plant their major tomato crop soon after the disease-prone rainy season for harvest in late November and early December. The area cultivated is largely limited by the water source and the capacity of water pumping device employed. The "off season" tomatoes from Karal are planted in rain depressions ("bas-fond" cultivation). Under this type of culture, the time of planting and the area planted are highly dependent on the amount of rain and temperature levels which determine the rate of soil moisture evaporation in the depressions.

TABLE 1

#### CASES OF TOMATOES WHOLESALD IN THE CENTRAL MARKET BY REGION January 7-31, 1992

Region	cases	Percentage
Karal	1,033	9%
Linia	4,065	35
Bougmene	3,168	27
Dourbali	1,808	15
Miskine	909	8
Koundoul	799	6
Total	11,782	100%

During this period, about 60% of the supply comes from Bougmene and Linia. Tomatoes from Karal begin to reach the N'Djamena market in mid-December, but do not become a significant amount until early January. From that time until late February they represent about 10% of the daily supply. During January and February an average of 16 vehicles were arriving daily carrying more than 500 cases of tomatoes to the Central market.

Relevance to Wholesale Marketing Strategy: The amount of wholesale activity during this period means that an improvement in marketing efficiency can have a significant impact on large numbers of producers, marketing persons and consumers in this season and the Karal season. In the two months of January and February an estimated 1,500 metric tons of fresh tomatoes with a wholesale value of about 65.5 million CFA (\$240 thousand @ 272 CFA = \$1) are wholesaled through the Central Market.

## Shipment of Tomatoes from the Field to N'Djamena

The movement of tomatoes from field to Market differs for each of the tomato producing regions, depending on the distance from the producing fields to the N'Djamena market. All of the producing areas depend primarily on traders (who are usually also local producers) from their areas to organize the transport collection from the individual fields and shipment to the N'Djamena market.

Because of the +100 km distance from Karal to the N'Djamena market, the logistics of shipping tomatoes from Karal is the most complex and provides a useful example of some of the field level procedures. The following description is typical of the transport schedule for Karal.

The movement of a case of fresh tomatoes from the field to the retailers stall is typically a two day affair. The first day, tea cases full of fresh tomatoes harvested that morning are loaded onto an N'Djamena bound pick-up truck. This truck can carry a maximum of 40 cases, but will usually be carrying between 30 and 36 cases of tomatoes and two or three passengers. The vehicle is owned by a "transporter" from one of the larger villages. It has been rented for the trip by a large producer who is also a trader. He picks up his own produce and, if there is remaining space, he will transport tomatoes for his neighbors. At this point neighboring farmers who want to take or send their small quantities of tomatoes to N'Djamena have two basic options from which to chose.

1) The small farmer may choose to sell his cases of tomatoes in the field to the producer/trader for the farm gate price. This eliminates the risk of not selling the tomatoes for a sufficient price to recoup costs, but it also eliminates the chance that the farmer will make a large profit by selling high. On the other hand, selling all his produce at the farm gate price also allows the farmer to remain at his work in the fields and the avoid the expenses of traveling to and from N'Djamena.

2) The farmers may accompany their own produce to market or consign it to others travelling on to N'Djamena. This is riskier than selling at the farm gate price as they may end up receiving less profit or actually losing money if the price is low or they are unable to sell their produce.

Once the trucks are loaded with tomatoes, they travel to the outskirts of N'Djamena where they stay overnight at a police barrier. The second day begins with the 6 AM opening of the barriers and the subsequent rush of trucks to the central market. Trucks from all tomato producing regions begin arriving in the wholesaling area just after 6 AM. By 8 AM most of the trucks

will have arrived and off-loaded their cases in a section of the street set aside for tomatoes from their particular region.

TABLE 2  
TRUCK ARRIVAL TIMES IN THE CENTRAL MARKET  
(January 9 - January 31, 1992)

Hour	Percentage Of Trucks Arriving
0600-0614	10%
0615-0629	13
0630-0644	22
0645-0659	19
0700-0714	9
0715-0729	7
0730-0744	5
0745-0759	2
0800 or After	13
	---
	100%

The data above shows that by 0700 nearly two-thirds of the vehicles have arrived and by 0800, 87% are at the market. Each day there are between 11 and 17 trucks arriving and discharging about 600 cases of tomatoes to be sold through 12 - 13 intermediaries to more than several hundred retailers.

Relevance to Wholesale Marketing Strategy: There are no daily harvest or shipping constraints to arriving at the market in time for early sales. Large quantities of tomatoes arrive daily accompanied by producer/traders who can make on-the-spot marketing decisions about where to wholesale their tomatoes. The N'Djamena markets are easily accessible to shippers from all producing areas. There are no marketing licenses required or other formal regulatory restrictions that would reduce trader flexibility in choosing other markets. Interviews with producers indicate that they have no objection to selling in other markets if they receive good prices.

#### Karal Producer/Trader Marketing Costs

Below is an example of the typical marketing cost of a producer/trader from Karal. In this example the cost of marketing a case of tomatoes is 2,200 CFA. Almost all of the various marketing costs may change, but the one with the greatest variation is the farm-gate price. At the beginning of January, the farm-gate price was 1,000 CFA per case. By mid-February it had dropped to 500 CFA per case. At the time of the extremely

low prices, the Sultan may waive his 100 CFA fee. The overnight storage fee of 50 CFA is applied only to those cases that are not sold on the day delivered and heldover for the next day's sales. If these three costs are minimized, the total marketing cost to the producer/trader is reduced to 1,800 CFA.

TABLE 3  
KARAL PRODUCER/TRADER COSTS PER CASE

Farmgate Price	750 CFA
Transport Fee	1,000
Sultan Fee (Karal)	100
Unloading (Mkt)	50
Commission Fee(Mkt)	250
Overnight Storage	50
-----	
Total	2,200 CFA

Relevance to Wholesale Marketing Strategy: Of the marketing costs paid by the producer/trader, the only one that might be directly reduced by the dispersion of wholesale markets is a reduction or elimination of the commission agent's fee (250 CFA) which would lower our typical producer/trader costs to 1,950 CFA.

**Commission Agents (Marketing Intermediaries Between Traders & Retailers)**

Each section of the street is the domain of one or more commission agents who act as intermediaries between the producer/traders and the retailers. The intermediary does not purchase tomatoes from the producer/trader for resale to retailers, he negotiates a price and facilitates the actual transfer from trader to retailer. The function is similar to that of a real estate agent who leads the negotiations between the seller and the buyer. The commission agents usually come from the same region as the producers/traders and have ethnic and familial ties with them. They are permanent residents of N'Djamena with an extensive knowledge of the market and a continuing relationship with the retailers as well as the producers which enables them to a price level that will be acceptable to both parties. As the relationship between the commission agent and the retailers and producer/traders is a long term one a successful agent must maintain the trust of both parties.

At the Central Market, three of the commission agents, Mbodou, Ali Abdoulaye and Ali Idriss, have been selected by other intermediaries to present any marketing problems to the city authorities. These representatives will take problems and

disputes to the persons responsible for markets at the Mayor's office. This direct connection with the city authorities gives the intermediaries a great deal of influence in the market in resolving disputes and solving problems at an informal level.

As each truck load of tomato cases arrives, the commission agent negotiates with the retailer and producer/trader to set the price per case at a level that is acceptable to each. He is paid a standard fee of 250 CFA per case sold. The commission agent negotiates a standard per case price for an entire truck load of cases arriving on the same truck. If there is more than one truck arriving from the same region the price usually covers all of the tomatoes arriving from that area. In addition to this role as negotiator, the commission agent may provide trusted retailers with credit to buy one case of tomatoes to be repaid when the retailer has sold its contents.

The following is a listing of the commission agents that provide the intermediary service for traders from each of the producing areas.

TABLE 4

**COMMISSION AGENTS FOR TOMATOES IN THE CENTRAL MARKET**

**Karal-Dourbali:** Ali Idriss, Hamra, Hamet Moussa, Zara Souleymana, Ali Bakar, Mouss a Moussei

**Bougmene:** Abderamane

**Miskine:** Mahamat Malloum Adam

**Linia:** Maimouna, Halima, Hawa, Ali, Ali Abdoulaye, Ali Bokori, Mohamat Abdullah

**Koundoul:** Djamila, Fohrdo

Of the 17 commission agents shown in the table above, five are women. On any one day there may be 10 to 12 commission agents active at the same time in the market. Bougmene and Miskine have only one commission agent each and they are active every day. The various commission agents for the other areas are called upon when producers with whom they have an agreement to sell arrive.

Although commission agents are paid a flat fee for selling a case of tomatoes, they are "commissioned" by the trader and the traders satisfaction with the service is necessary if the agent is to be retained. The commission agents costs per case at the central market are 70 CFA which leaves him with a net of 180 CFA on his 250 CFA selling fee.

TABLE 5

## COMMISSION AGENTS COSTS PER CASE

Taxes & Rent	25 CFA
Parking fee (1,500/truck with 33 cases)	45
-----	
Total	70 CFA

Relevance to Wholesale Marketing Strategy: The multifaceted role of the commission agent is the least understood element of the tomato wholesaling market and thus it is difficult to evaluate what the potential effects would be of wholesaling in markets where there are no established commission agents. Although traders from the producing areas tend to think of the commission agent as receiving a large fee for a simple service, the lack of experienced commission agents in the other markets may be a major constraint to effective functioning if these markets were opened to wholesaling. On the other hand, in smaller markets, traders arriving from the producing areas may be able to establish a good rapport with the retailers and adequately carry out the intermediary's function without the 250 CFA fee.

## Retailers

In January, there were about 500 tomato retailers in the five major markets. Most of these were able to sell a case of tomatoes a day. In the Central and Millet markets retailers average a little more than a case a day. Retailers in the small established markets and those who sell on the street throughout the city are usually not able to sell a full case daily. Two or three retailers will often share a case.

There are about an equal number of men and women retailers selling tomatoes. The male-female ratio and the ethnic composition changes from market to market. In the Central and Dembe markets, about half the tomato retailers are men and half are women. In the Millet Diguél markets more than two-thirds of the retailers are women. Only in the Cholera Market is there a predominance of male tomato retailers. Ethnically, almost all male retailers are Kanembou and the women are a mixture of Kanembou and Arab.

TABLE 6  
NUMBER OF TOMATO RETAILERS & CASES SOLD DAILY  
BY MARKET

(January 15, 1992)

Market	# retailers	# cases sold	Percentage Sold
Central	122	162	33%
Millet	111	111	23%
Dembe	64	64	13%
Cholera	59	65	13%
Diguel	42	42	9%
Other	n/a	39	8%
Total		483	100%

Tomato retailers coming from markets other than the Central Market have informal buying associations. One or more other tomato vendors will be delegated to go to the Central Market to buy tomatoes for the members of the association. This system allows the participants to save both time and taxi fare. Once the price is negotiated and the cases have been purchased, the retailer will pay to have them push-carted back to his stall.

TABLE 7  
COST OF TAXI & PER CASE COST BY PUSH CART  
FROM THE CENTRAL MARKET TO OTHER MAJOR MARKETS

From Central to:	Taxi (CFA)	Per Case by Push Cart (CFA)
Millet	100	100
Cholera	100	150
Dembe	100	250
Diguel	100	250

The following is an example of typical costs paid by a retailer from Dembe Market to sell a case of tomatoes. The wholesale price is highly variable, but 2,500 CFA representative price at the middle of the marketing period. The push-cart transport cost is somewhat negotiable, and the storage fee is applied only if the retailers has to store part of his case of tomatoes overnight.

TABLE 8

## RETAILER COSTS PER CASE

Wholesale Price	2,500	CFA
Push Cart	200	
Storage fee	50	
Stall fee	25	
Plastic bags	70	
Water	25	
-----		
Total	2,870	CFA

Relevance to Wholesale Marketing Strategy: Changes in the wholesale cost of a case of tomatoes would have the greatest potential in increasing reducing retailer costs per case. The reduced pressure on the retailer to make snap decisions on the retail value of tomatoes would be expected to bring wholesale prices more in line with their retail value. Over all, the wholesale price would not be expected to change unless the over all quality of tomatoes changed. The main financial change brought about by dispersion of the wholesale markets for retailers would be a reduction in the price of transporting tomatoes from the Central Market to the retail market by push cart. Theoretically, this fee would be eliminated, and the taxi cost would be eliminated.

VEGETABLE WHOLESALE MARKETS IN N'DJAMENA

N'Djamena is supplied with most of its fresh produce through a system of daily open air markets. Each of the three major wholesale markets sell a wide variety of products, but tend to specialize in certain agricultural commodities. Each of the wholesale markets has a covered retail market attached to it. At the retail level all of these markets stock a similar range of produce.

The Central Market is the largest and most important of the daily markets, serving as the dominate distribution point for a number of fruits and vegetables including onions, garlic, mangoes, fresh okra, melons, water melons and tomatoes, all major ingredients in a typical N'Djamenois diet. It is essentially the exclusive wholesaler of fresh tomatoes, except during March and April when some producer/traders wholesale their tomatoes in the Cholera market or the Millet market. Several years ago, the Mayor's office redesigned the market, allocating space to specific fruits and vegetables. However, since then retailers have encroached into the wholesale area and produce trading areas for specific vegetables are scattered.

Before evaluating the feasibility of introducing tomato wholesaling in the other markets, the following will give a summary analysis of the advantages and disadvantages of tomato wholesaling in the Central Market.

### Advantages of the Central Market for Tomato Wholesaling

Accessibility: The Central Market wholesale entrance for vehicles is accessible directly from Avenue Charles de Gaulle.

Large Market: The Central market is not only the main tomato wholesaling market, it is the largest retail point for fresh tomatoes. The market supports some 122 retailers who account for and estimated 33% of the tomatoes retailed in N'Djamena.

Experienced Commission Agents: Traders know market and trust the commission agents found in the Central market to negotiate a good price and move their produce. Retailers sometimes receive short term credit from commission agents, a service that producer/traders would be hard pressed to duplicate. Commission agents are paid on the basis of how much volume they are able to move they have a vested interest in maintaining the Central market as the single important wholesale point.

Convenience in Locating Scarce Supplies: From the end of May through November the quantity of tomatoes coming into N'Djamena is quite low. In this season there are typically less than 20 cases in the market on any given day. Bringing all produce into the Central market insures that retailers will be able to find any tomatoes that make their way into the city.

Variety of Quality & Prices: Having a large quantity of produce come into the Central market allows retailers to chose from a wide variety of quality and price levels to find the case most suited to their needs.

### Problems Arising From Wholesaling In The Central Market

#### Over Centralization

- Lower availability of tomatoes in outlying markets.
- Difficulty reaching all possible markets.

#### Overcrowding

- Flooding the market with tomatoes which lowers producers

returns.

-Increased congestion which leads to slower supply and easier theft.

### Increased Distance

-Increased transportation costs for retailers.

-Lost time for retailers from outlying markets

-Additional transport damages tomatoes and lowers their retail value.

## ANALYSIS OF SPECIFIC MARKETS

### CHOLERA MARKET

Traditionally, this market is used by the Karal producers to wholesale much of their perishable produce and maize. The first "Karal" hangar is operated by a M. Algouni and several other intermediaries who have family ties to Karal. In spite of this connection, in January 1992, the Federation of Groupements of Karal built another hangar at the Cholera market which will compete directly with Mr. Algouni's hangar.

There already exists a wholesale market for tomatoes, but at this season it remains small, irregular and does not become significant until the middle of the Karal tomato season in March. In the Karal Bas-fond season, a few producer/traders bring their poor quality, unsorted and bruised tomatoes to this market because they feel that they cannot compete with better quality tomatoes at the Central market and they might be able to get a better price.

In January, when the project surveyed the market, there were an estimated 59 retailers selling approximately 65 cases of tomatoes per day. This was about 13% of tomato sales in N'Djamena. The market is located in a relatively high density residential area and is bordered on two sides by major vehicle thoroughfares. Aggressive retailers will sell tomatoes in the covered area of the market in the mornings until about noon and in the late afternoons may sell at road side stands.

### Technical Feasibility

#### Existing Necessary Conditions

- Space for unloading and selling
- Hangar for storage with guardian
- Experienced commission agents

### **Advantages to Expanding Tomato Wholesaling**

- Wholesale market is well known to Karal producers
- Hangar capacity not fully utilized
- Highly accessible to producers from major growing areas
- Shorter supply distance to Diguel and Dembe markets

### **Economic Feasibility**

#### **Existing Necessary Conditions**

- Retailer demand - one to two pick-up loads daily

#### **Advantages**

- Reduced cost for push-cart transport for retailers
- Reduced marketing costs
- More business for commission agents
- Faster sales for producer
- Potentially better price for producer

#### **Constraints**

- Competition with Central Market

### **Social Feasibility**

#### **Existing Necessary Conditions**

- Ethnic ties with and trust already established between commission agents and producers

#### **Advantages**

- Hangar owned and operated by the Federation

#### **Constraints**

- Possibility of social conflict between hangars

This evaluation shows that it would be technically, economically and socially feasible to expand the Cholera Market as a wholesaling point for tomatoes. The two existing hangar facilities for produce give it the capacity to become a major point of sale.

## **MILLET MARKET**

The Millet market has a history of tomato wholesaling, but this wholesaling is limited to special producer/trader and intermediary relationships and is not a generalized activity. It is only when tomatoes belonging to certain producers are being harvested that tomatoes will be wholesaled in the Millet market. In terms of perishable produce, the Millet Market specializes in tubers.

The Millet market is the second largest retail point of sale for fresh tomatoes in N'Djamena. There are an estimated 111 retailers selling approximately 111 cases of tomatoes a day, thus comprising a 23% market share.

### **Technical Feasibility**

#### **Existing Necessary Conditions**

- Space for unloading and selling
- Hangar for storage with guardian
- Experienced commission agents

#### **Advantages to Expanding Tomato Wholesaling**

- Highly accessible to producers from major growing areas

#### **Constraints**

### **Economic Feasibility**

#### **Existing Necessary Conditions**

- Retailer demand - three to four pick-up loads daily

#### **Advantages to Expanding Tomato Wholesaling**

- Reduced cost for push-cart transport for retailers
- Reduced marketing costs
- More business for commission agents
- Faster sales for producer
- Potentially better price for producer

#### **Constraints**

- Strong competition with Central Market because of physical proximity

## Social Feasibility

### Existing Necessary Conditions

- Ethnic ties with and trust already established between retailers and producers

### Constraints

- Limited ethnic ties already established
- Retailers with strong ties to the Central Market

Because the Millet market already has a limited but functioning tomato wholesale market and because of its proximity to the Marche central, changing the system in place appears inappropriate. Though it would be technically feasible, there would not be any great economic advantage compared to the present. The ethnicity and selective ties between certain farmers and commission agents may even be a constraint to the wholesaling of tomatoes at the Millet market.

## DEMBE MARKET

The Dembe market is an important retail market located on the Eastern edge on N'Djamena and serves a clientele that is primarily southern. Dembe does not have an established wholesale market although there is a small wholesale hangar operated by a group of five wholesalers under the name of the Cooperative de Fruit, Legumes et Tubercules (CFLT). This facility limits its activities to wholesaling mangoes, manioc, okra and sweet potatoes.

An estimated 64 retailers sell about one case of tomatoes per day, comprising 13% of the total sold in N'Djamena. Most of the tomatoes come from the Central Market. A taxi back and forth costs the retailer 200 cfa and a push-cart costs 150-250 CFA per case. Some of the retailers buy their tomatoes from a small, unofficial market on the street near the Chagoua bridge. At the Chagoua bridge market small amounts of good quality tomatoes are brought across the bridge by bicycle or headloads from Walia in big basins and sold directly by the producers at prices competitive with the Central Market. The retailers will then have their purchases transported to the Dembe market in a push cart at 50 CFA per case.

In May 1991, the ACDI project attempted to introduce tomato wholesaling. This proved to be unsuccessful because of lack of publicity and information given to the retailers at Dembe. In addition, there had not been sufficient contact between the commission agents and the Karal farmers. Retailers show a great interest in having a wholesale tomato market there. This could be done either through the CFLT cooperative or by selling the cases

directly on the side of the road in front of the market, or both.

### Technical Feasibility

#### Existing Necessary Conditions

- Space for unloading and selling
- Hangar for storage with guardian, but capacity limited
- Experienced commission agents (limited)

#### Advantages to Expanding Tomato Wholesaling

- Highly accessible to producers from major growing areas

#### Constraints

- Potential for wholesale facilities, but not yet organized
- Commission agents not familiar with tomato wholesaling
- Hangar space limited

### Economic Feasibility

#### Existing Necessary Conditions

- Retailer demand - two to three pick-up loads daily

#### Advantages to Expanding Tomato Wholesaling

- Reduced cost for push-cart transport for retailers
- Reduced marketing costs
- More business for commission agents
- Faster sales for producer
- Potentially better price for producer

#### Constraints

- Potential for competition with CFLT
- Potential for competition with Chagua bridge market

### Social Feasibility

#### Existing Necessary Conditions

- Ethnic ties with and trust already established between retailers and producers
- Some experience with in-market wholesaling

#### Advantages

- Existing precedent

## **Constraints**

- Limited ethnic ties already established
- Retailers with strong ties to the Central Market

Dembe market seems like the ideal place for establishing a wholesale market for tomatoes. Because of the size of the demand at the Dembe market and because of the economy of time and money spent on the transport of tomatoes from the Central Market, it would seem feasible to establish a wholesale point there. In terms of the technical feasibility, there are two options for establishing a wholesale market. Producers could chose to take advantage of the CFLT facilities and commission agents, spending no more than they already do at the Central market. They could also chose to unload their produce and proceed with its sale on the side of the street and directly to the retailer thus saving the 250 cfa intermediary fee. Both options, therefore, are feasible and would be advantageous in different ways.

One possible constraint is that Dembe retailers are accustomed to arriving early in the morning at the Central Market to purchase tomatoes. With a Dembe wholesale market, trucks would have to arrive early to forstall buying from the Central Market.

## **DIGUEL MARKET**

Diguel is a relatively small market with only an estimated 9% share of the tomato retail market. Forty-two retailers sell about a case a day, although a number of retailers said they had difficulty finishing selling a case in one day. These retailers supply themselves at the Central market. Two retailers will often share a case if they can't afford a whole one. Most of the retailers said they would be very interested in buying directly at the Diguel market if good quality tomatoes were offered. Because of its location on the road into N'Djamena from Karal, the Diguel market seems like an ideal place for a drop off point for the wholesale of tomatoes.

## **Technical Feasibility**

### **Existing Necessary Conditions**

- Space for unloading and selling

### **Advantages to Expanding Tomato Wholesaling**

- Highly accessible to producers from Karal

### **Constraints**

- Wholesale facilities not yet organized
- No experienced commission agents
- No hangar space

### **Economic Feasibility**

#### **Existing Necessary Conditions**

- Retailer demand - one pick-up load daily

#### **Advantages to Expanding Tomato Wholesaling**

- Reduced cost for push-cart transport for retailers
- Reduced marketing costs
- Faster sales for producer
- Potentially better price for producer

### **Social Feasibility**

#### **Existing Necessary Conditions**

#### **Advantages**

- Direct sales to retailers

Though the Diguel market is small compared to the four other major markets, both retailers and producers could benefit from having a point of wholesale for tomatoes there through reduced transportation costs and saving on intermediary fees.

### **FARCHA MARKET**

Farcha is a small local market on the Northern edge of town. Some of its tomatoes are supplied through the Central market but most come directly from nearby villages along the river at competitive prices. There are only approximately 30 retailers selling less than 30 cases of tomatoes daily. Although there are no serious technical constraints to increased tomato wholesaling, there is not enough demand to make it worthwhile to bring in a pick-load of tomatoes.

### **MOURSAL MARKET**

The Moursal market is a formal, but small neighborhood market located in the southern quarter of N'Djamena. There are only half-dozen women selling a few piles of tomatoes each. Most of the tomato supply comes from the informal tomato wholesaling point at the Chagua bridge.

## CONCLUSIONS

**The Markets:** Expansion of tomato wholesaling into Cholera, Diguel, and Dembe markets is technically, economically, and socially feasible and would likely benefit both producers and retailers. Increased tomato wholesaling is practically assured in the Cholera Market as the Federation of Karal producers has established a marketing hangar.

Expansion in the other markets, Millet, Farcha and Moursal is, for various reasons, either not feasible or not significantly advantageous to either group. Expanding tomato wholesaling in the Millet market is obviously feasible as it is already acting as a point of wholesale. However, as it is only a short distance away from the Central market the benefits of an expansion are negligible. Farcha and Moursal both lack the capacity to sell enough tomatoes to be economically viable points of wholesale for large producers.

**The Benefits:** The most direct and measurable benefit to market efficiency is expected to be reduced costs of transporting tomatoes from the Central Market to other markets. At a macro level, wholesale prices of tomatoes are not expected to be affected, however in the less crowded markets retailers will have the opportunity to better judge the retail value of the tomatoes they are buying and pay a more advantageous price for the better quality tomatoes.

The producers may have to assume the role of intermediary as neither Diguel nor Dembe has trained tomato commission agents and the Hangar at Cholera is designed to circumvent the existing commission agents. If the producers are willing and able to take on this expanded responsibility they can turn the 250 CFA intermediary fee into almost pure profit (minus taxes and storage costs). However if the producers are unwilling or unable to assume this role then it will be necessary to find contacts at Diguel and Dembe who have the trust of producers and retailers and who could serve as an intermediary between the two.

With tomato wholesaling being carried out in his market, the retailer will have a choice of buying in his market or the Central Market. It is expected that this will help rationalize marketing decisions particularly in terms of price and quality.

**Conditionalities for Success:** Retailers willingness to buy wholesale at these markets is linked to these conditions.

1) **Quantity:** sufficient quantities of tomatoes arriving in a timely and predictable fashion.

To insure the timely arrival of a sufficient quantity of tomatoes, producers must be able to organize regular

schedules of deliveries to the markets. If the trucks do not arrive early enough or on scheduled days retailers will have to travel to the Central market to purchase their tomatoes. This means risking purchases of lower quality tomatoes and lower daily sales as a result of their late start. This could seriously undermine retailer confidence and willingness to participate in the new system.

2) **Quality:** the tomatoes that arrive are high quality and competitively priced.

**Quality:** A consistent concern of retailers is access to high quality tomatoes. Most retailers made their willingness to purchase tomatoes wholesaled at local markets contingent upon the tomatoes being of acceptable quality. There appears to be a fear that producer/traders would be tempted to deliver lower quality tomatoes than would be found in the Central Market. Given this concern, the opening of new wholesale markets are likely to be successful if they can provide the quality tomatoes demanded by the retailers.

**Compatibility with Project Interventions:** In order to insure higher quality produce, the supply of new points of wholesale should be undertaken concurrently with the implementation of the Harvest Maturity Program and the Program for Sorting and Grading at the Field Level. These interventions should result in higher quality tomatoes being supplied which will in turn help to increase retailer confidence and acceptance of the new markets while providing producers with a higher price per case.

#### IMPLEMENTATION OF TOMATO WHOLESALE DISPERSION

Beginning with the Karal harvest in March, the project will monitor the tomato wholesaling at the Cholera market at both the traditional hangar of Mr. Algoni and the new Federation hangar. The Federation hangar without a commission agent (none is planned at this time) will add a new dimension to high volume tomato wholesaling. Wholesale information will also be collected from the Central Market and the Millet Market.

After retailer buying patterns have been established throughout the city, the project will attempt to introduce tomato wholesaling into the Dembe and Diguel markets. The project will evaluate the acceptance of wholesaling at the Dembe market and the effects it has on othermarkets.