

## CHAPTER THREE

### Population Growth and Market Development in Colonial New York City

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#### INTRODUCTION

When we think of colonial New York City from 1500-1790, how do we figure food markets developed? Did they exist? We imagine the colonists living on farms in which they grew their own vegetables, and practiced simple agricultural techniques. We see them raising chickens, harvesting their eggs, and killing them to make their meals. Our minds would also lead us to believe that the markets in existence then were elementary. We would think there were probably three or four of these markets in existence and families had to travel far to reach them and receive the goods they needed. Before beginning our research, we speculated that there were no marketplaces in existence before the eighteenth century. We assumed that settlers traded with the Native Americans instead of forming legitimate stores, and if there was an established food trading system, the methods and means of selling food would have been considerably less structured. Our ideas about food markets were incorrect. Although informal trading with Native Americans was quite common, market places did exist; our chapter reinforces this finding and explicates specifically what these markets consisted of.

The first informal markets occurred amongst the first human inhabitants of New York City: the Native Americans known as the Lenape. They were one of the oldest cultures of Algonquin civilization in northeastern America (Sanderson 2009). The Lenape lived in Manhattan and other surrounding areas dating back to 1000 B.C.E (Pritchard 2002). They had a distinct food culture, cultivating corn, squash, and other crops using technologies made from plant and animal materials (Pritchard 2002). However, with the arrival of Dutch colonists in 1609, a whole new variety of animals, traditions, tools, and foods were introduced. This marked a cultural transformation of New York City as Dutch cooking methods, technologies, and trading processes predominated with the growth of the colony. This culture shift also brought about few gradual changes in the crops produced in New York City because of the lack of commercial farming and trade during this period. This demonstrates how the evolution of food production in the early colonial era set up the roots of modern farming, as well as changes in types of food consumed in New York City. Our claim is that colonial New Yorkers used complex food markets similar to the markets of today. New York became urbanized early in its colonial existence, and this allowed the development of complex markets to be an important part of the culture of New York (Voe 1862).

Food markets during the early colonial period were highly organized; they developed in a way that would allow for great economic expansion. Though early New Yorkers did practice some simple agricultural techniques, these techniques were mostly used for producing staple crops for simple production and trade (Cochrane 1993). The use of agriculture for sustenance was more characteristic of the Native American Indians (Duffy 1968, Cochrane 1993). We compiled research on the history of food trade in

America, specifically looking at data pertaining to the Northeast and the colonial era. This data was useful in examining what foods, methods, and technologies were native to New York City, and which arrived with the colonists themselves. We included an extensive account of the early history of New York and the colonists' forms of settlement and survival. After concluding this background research, we were left with three interrelated questions: How were food markets structured? How did they develop? How did this process relate to population growth in colonial New York City?

In order to better organize the information gathered, we have chosen to divide this chapter into several sections. In our literature review, we describe the history of New York City from as early as the Dutch rule during the seventeenth century to the English capture of New Amsterdam in the eighteenth century. This background information is essential in understanding the development of markets and trading. We then identify food production and trading specific to the Lenape and the Dutch, and describe any changes that occur during the colonial period. Our literature review also includes an overview of urbanization and the significance of marketplaces. The findings use case studies to recount several marketplaces that formed along the East River, including their structure, location, and development. Our discussion addresses the uncertainties and biases in our research, as well as the implications that our findings have. Finally, our conclusion is a very brief summary of our research and results.

## **LITERATURE REVIEW**

### **A. Lenape Culture**

The Lenape were the primary inhabitants of New York for thousands of years. They witnessed the arrival and eventual settlement of Europeans from the appearance of Giovanni da Verrazano in 1524, to the arrival of Henry Hudson in 1609 (Wallace 1999). Their lifestyle was well adapted to the natural terrain of pre-settled New York City. They were avid users of the many New York City waterways, whether for fishing, hunting trips or wars amongst themselves and nearby tribes. The Lenape also developed many techniques for hunting and fishing, as it was a main source of trade as well as food a source for them. To support their growing population, the Lenape planted beans and maize, and harvested large quantities of shellfish and regular fish from the bay. Unlike later European settlers, the Lenape lived in temporary campsites across the city, migrating with the seasons. As Burrow and Wallace (1999) write,

In the spring or early summer, a band could be found near the shore, fishing and clamming; as autumn approached, it moved inland to harvest crops and hunt deer; when winter set in, it might move again to be nearer to reliable sources of fire-wood and sources of smaller game (1999, p.5).

Though the Lenape were the main inhabitants of New York City, they did not lay claim to any one piece of land, but rather occupied various areas based on their seasonal needs (Wallace 1999). This constant movement impacted what the Lenape carried with them. As Pursell (1995, 2007) writes, "The mobility of tribes--their adaptation to the change of seasons and resources of the land--helped keep material culture to a minimum, and notions of property were based on contingent use rather than exclusive inherited property rights." (1995, 2007 p.12). The nomadic nature of the Lenape people thus impacted their cultural lifestyle.

Because of the Lenape lifestyle, sixteenth century New York would have been considered a non-urbanized region. Urbanization requires the existence of a factor that

would allow for economic growth and complex production methods, cause many individuals to gravitate toward one particular area, and increase capital interest. The conditions under which the Lenape existed would have prevented a phenomenon like urbanization because there was not any capital interest or economic growth present. Also, the population density of the Lenape people remained relatively low; the Lenape did not gravitate towards one particular area. Keeping the lives of the Lenape in mind, we can see a change in climate occur when the colonists begin to occupy and alter the land.

### **B. European Settlers**

It is estimated that by the time the Dutch began the first European settlement of New York City there were approximately 15,000 Lenape in the region. However, European settlement became a long and complicated process that resulted in a European population that far outnumbered the Lenape. In 1609, the Dutch East India Company hired a seaman named Henry Hudson to sail in the name of Amsterdam to the East. Hudson chose to navigate to the West, despite the orders he was given. He arrived in New York and obtained several animal furs to return to Europe. The Dutch Republic quickly recognized the possibilities that the New World had to offer (Brown 1934). By 1610, there were already various fur trade stations established from Maine to New Jersey. Four years later, Captain Hendrick Christiansen raised a fort in what is now Albany. The territory between the Delaware and Connecticut Rivers became known as New Netherland.

The traders sent to New Netherland upon Hudson's return to Holland in 1609 had no intention of remaining in America beyond the time that they could secure fur trade. The States General in Holland granted a three-year trade monopoly to Dutch Merchants

who formed the New Netherland Company in 1614. Therefore, Fort Manhattan was built as a temporary shelter and trading post until the Dutch West India Company became officially organized. Their charter expired, yet no other merchants were excited about establishing a colony in this uncharted continent. The Dutch agreed that in order to remain successful, a permanent residence must be formed. As a result, New Amsterdam became the seat of a colonial government that controlled the possessions of Holland in America (Janvier 1894). Thus, the monopoly known as the Dutch West India Company was created. The Dutch sought to base the Dutch West India Company on the original East India Company. The corporation was given a twenty-four year contract on June 3, 1621. The rules for the Dutch West India Company were formed in 1623; they were called an Artikebrief. One year later, the first few families set out and colonized the area from Fort Orange (present day Albany) to Fort Nassau (now Gloucester, New Jersey). As more settlers arrived, the New York Bay became filled with people all the way down to its Brooklyn shore. Manhattan Island was becoming New Amsterdam; ships filled with cattle, settlers, and goods were sent across the Atlantic Ocean to help support the new colony (Wallace 1999).

Commerce was the very heart of New York City, even at its beginnings. In 1625 the Dutch founded New Amsterdam in search of fortunes and within a few years traders became successful merchants. Many new colonists were arriving to New Amsterdam because commerce was opened to all residents of Dutch Provinces due to the Proclamation of Free Trade. The Dutch learned that New Netherland would not be a success unless a more liberal policy was used, so they removed trade barriers in 1640. The monopoly was destroyed and trade developed (Rankin 1948). Article six of this

document proposed that, “Amsterdam shall provide a suitable piece of land on the banks of a river for a proper dwelling-place for the colonists. The place shall be provided with a trench and wall on the outer side, and the inner ground be laid out with streets, a market, and in lots, for the advantage of merchants, mechanics, and those who will pursue agriculture-the whole to be done at the cost of said city.” After article 6 was passed, many Englishmen took advantage of mercantile opportunities and in due time outnumbered the Dutch, according to customhouse records (Archdeacon 1976). Eventually, every inhabitant of New Amsterdam had shares in shipments. In 1650, a resident claimed, “Everyone here is a trader” (Shorto 2004).

Although the original inhabitants did not mind new settlers, they strongly petitioned against itinerant traders. Around this time, piracy became frequent in New York City and the first crimes of fraud and smuggling appeared. In fact, by 1657, even the most honest of traders were in some way involved with piracy. The pirates were chiefly Englishmen and once the city fell to the English corruption became widespread; even the most prominent of merchants acquired their fame through illegal terms. Finally, the Earl of Bellomont, Sir Coote, who was the governor of New York in 1698, removed the officers at the customs and buffered the amount of trading crimes in the colony (Singleton 1930).

In 1647, Peter Stuyvesant replaced Kieft as governor of New York, hoping to make trading regulations even more effective. He designed rules to end smuggling in an attempt to correct Kieft’s mistake of overlooking this crime. He also created a much more efficient system in his seventeen years in position. He passed laws that restricted trading

because he required all merchants to obtain “burgher’s rights,” the rights of official residents. His attempts helped create a more sophisticated society.

Meanwhile in England, the Duke of York had plans to expand British control in the New World. By the 1660s there were thirteen English towns in Long Island and five Dutch towns. The Duke of York continued to persuade the king to allow him to rule the land from the Delaware to the Connecticut River-which was, in essence, New Netherland. He sent two thousand men under the order of Colonel Richard Nicolls to New Amsterdam. Although Stuyvesant was prepared to fight, the other settlers were not willing to risk their lives, especially because Nicolls guaranteed them their freedoms and their estates. Therefore, on September 8, 1664, the English seized New Netherland from the Dutch (Rensselaer 2007).

With the takeover of the British in 1664, New Netherlands was renamed New York and many of the Dutch were pushed out. The settlers continued with their subsistence agriculture, while other farmers created trade-centered communities. The biggest change in the region during this period was the building of plantation-like farms, which would lease land to the more ambitious farmer. Yet, during this time, there was a very important expansion happening in New York City that once again had much to do with the Dutch (Linder 1999).

Before 1790, following the British invasion, Brooklyn had become a Dutch community of farmers. The Dutch were booted off Manhattan and moved to Brooklyn. They created six townships of farming communities: Bushwick, Brooklyn, Flatbush, Flatlands, New Utrecht, and Gravesend. By 1790, “Kings County had long been an agricultural producer for the rest of New York City” (Linder 1999). These Dutch “



Farmers there... were among the first to develop intensive agriculture in the United States and use fertilizer” (Linder 1999) as well as produce enough to feed the entirety of the New York population which even in the late eighteenth century was a large one with a huge prospects of becoming larger. It is important to note that “[f]arming in the New York City Area... had been devoted largely to grains and livestock [before 1790]” (Linder 1999), but by this time in the late eighteenth century, many new types of crops had been introduced in Brooklyn. Brooklyn produced mostly grains because chief amongst the crops of colonial New York were wheat, corn, oats, and beer. However, “In [the] 1790s , a British visitor remarked [that] the chief occupation [of Kings County was] raising vegetables for the supply of the market of New York” (Linder 1999). Brooklyn was able to produce cabbage, beans, pumpkins, leeks, gourds, squash, sage, onions, rosemary, and mint. By the 1790’s, Brooklyn was producing it for all of New York City.

### **C. Lenape-Colonist Interaction**

Increasing interaction between the Lenape and the European colonists made food trade especially important. Food technology, which is the science of food engineering, management, production, and nutrition, deals with many of the farming and trading activities that both groups engaged in during this era. Burns (2005) writes,

Despite the spectacular advantages European technology gave in some areas, early European settlers depended for day-to-day survival on technical procedures already developed by Native Americans. Many aspects of growing and preparing New World Crops such as corn and tobacco were obviously dependent on Native American knowledge, although colonists often operated on a far more vast scale than did the indigenous habitants (2005 p.xiii).

The lives of early New York colonists were very much intertwined with the lives of the Lenape. Thus, the settlers were prevented from completely dominating the land, at first.

Though there was some European-American Indian trading practices before the official establishment of any European colonies on the island of Manhattan, it was not enough trade to change the environment of Manhattan at that time. During the early seventeenth century, New York could not be completely urbanized because the Indians still occupied a large part of the land (Kammen 1996). In fact, Manhattan's environment didn't change until a while after the colonists had settled. One of the earlier settlers even describes his surroundings as wilderness and acknowledges the presence of many Lenape around him. Europeans would spend most of the first half of the seventeenth century buying land from the Lenape (Rodgers and Rankin 1948, Shorto 2005). Europeans had complete domination of the land after a few European-Indian wars. Later in the seventeenth century, things in New York changed dramatically. The economic climate changed, and markets were introduced (Duffy 1968). It happened slowly, at first, but Manhattan soon became highly urbanized and super developed. The history of the Lenape and the Europeans in New York City reveals a steady emphasis on food production and trade that laid the foundation for the later development of markets.

#### **D. Markets and Urbanization**

What exactly is a market? For the purposes of this chapter, markets can be described as systems in which goods are bought and traded (Stigler and Sherwin 1985, Gehlhar and Regmi 2005). Many factors can contribute to the facilitation of goods sold or traded in a market: the region in which the market exists, the people that the market serves, and the economic climate in the environment (Gehlhar and Regmi 2005). Markets in colonial America have a history of being complex and numerous (Breen 2004). Early

complications of New York markets could be a response to many factors, one of which is urbanization (Stigler and Sherwin 1985, Gehlhar and Regmi 2005).

Urbanization is often seen as a factor that creates impersonal relationships between people, ruins the environment, and causes the economy to soar. These depictions of urbanization are true to a certain extent, but urbanization is actually a more fluid phenomenon that varies over time and depends on location. Therefore it is not necessarily related to the negative connotations mentioned above (Anderson 1959). We also often mistake population growth as a product of urbanization, but urbanization can also be a product of population growth. This growth in a particular region encourages its inhabitants to introduce more creative and complicated means of delivering goods. It often creates growth of the economy and population concentration (Black and Henderson 1999). When speaking specifically about this process in reference to the economy as opposed to population distribution and peopling, urbanization has two components. These two components are the organization of production and capital investment (Black and Henderson 1999). Thus, urbanization in colonial New York City can be measured and tracked by following population growth, organization, and capital investment. Throughout this chapter, the word “urbanization” pertains to these three factors and as a product and cause of increased colonization and markets in early New York City.

## **FINDINGS**

Food markets in New York City increased in complexity from 1500 to 1790. By about 1628, the population of Manhattan was at 270. At this time, Dutch colonists had finally settled onto New York. The population continued to grow. They occupied most of the land, but there were still a few remaining Lenape. Between the 1640s and 1650s, the population size of New York increased exponentially. The population grew from about 400 or 500 people to approximately 1,000 people. By the year 1664, the population was at about 1,500 people (Cantwell and Wall 2001, Duffy 1968).

There were few but gradual changes in the types of food produced from 1500 to 1790. The only types of crops that were introduced in this three-century period were cabbage, beans, pumpkins, leeks, gourds, squash, sage, onions, rosemary, mint, as well as barley, buckwheat and oats. Although these crops may seem numerous, it must be noted that there were 300 years between the time at which these crops were introduced and the time at which they became fruitful. As mentioned, the significant changes illustrated in these findings were not in the variety of crops but in quantity and in the type of farming that begot them. Furthermore, the six towns of Brooklyn, which did so much for the feeding of the city, have been virtually erased. These factors set up the stage for the beginning of a great boom in commercial farming and production in general.

**Figure 2.1**

**Main Crops Produced 1500-1790:**

<b>Before and During 1500</b>	<b>After 1614 (Settlement of the Dutch)</b>	<b>After 1624-1790</b>
<ul style="list-style-type: none"> <li>• Corn</li> <li>• Beans</li> </ul>	<ul style="list-style-type: none"> <li>• Oats</li> <li>• Corn</li> <li>• Beans</li> <li>• Barley</li> </ul>	<ul style="list-style-type: none"> <li>• Corn</li> <li>• Beans</li> <li>• Cabbage</li> <li>• Leeks</li> </ul>

	<ul style="list-style-type: none"> <li>• Buckwheat</li> </ul>	<ul style="list-style-type: none"> <li>• Gourds</li> <li>• Pumpkins</li> <li>• Squash</li> <li>• Rosemary</li> <li>• Mint</li> <li>• Sage</li> </ul>
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The new and expanding population of Dutch colonists focused on agriculture.

They cultivated the land and produced many species of grains and vegetables. They had clothing and food from the various species of wild animals, fowl, fish, fruit, nuts, roots, and oysters. However, many of the products they desired came from overseas, and as they adjusted to American terrain, more tools were sent for from abroad. In 1660, the Secretary of the Dutch India Company issued a leaflet with a list of needed tools:

Tools needed: 12 plough shares with coulter, 1 first class wheel plow with pulleys, 12 two-prong hay and grain forks, 13 three-prong hay and grain forks, 100 iron teeth to make harrows, 24 best scythes, 24 good reaping hooks, 50 steeled axes, 20 winnowing fans, 30 spades, 30 shovels, 30 hoes, 20 iron rakes, 12 hay knives (Oliver 1956, p.7)

Ploughshares, coulter, and harrows are also tools involved in the plowing process. In 1625, a Dutch ship arrived in the colonies bearing European livestock - wagons, plows, tools, clothing, food seeds, firearms, and cheap goods for trade (Wallace 1999). As the above lists demonstrate, these technologies were made of heavy materials, and involved numerous parts and appliances to make them work. Dutch colonists also introduced more developed food storage and cooking technologies. Many settlers built large farmhouses with food storage cellars with small windows that could be kept cool in the summer and insulated with hay in the winter (Earle 1896, 1968). They also used Dutch ovens, Earle writes,

This was made of metal, usually tin, cylindrical in form, and open on one side, which was placed next the fire. Through this ran a spit by which meat could be turned when roasting. A bake-kettle, or bake-pan, was a metal pan, which stood

up on stumpy legs and was fitted with a tightly fitting, slightly convex over cover on which hot coals were placed. (1896, 1968 p.122).

In addition to these larger technologies, the Dutch used silverware made in Holland, including items such as silver tankards, spoons, coffee-pots, teakettles, cups, salt-cellars and pepper-pots (Earle 1896, 1968).

This new variety of products led to the creation of markets. The number of marketplaces at such an early time is surprising, there was many as forty. Although several market places have been discovered on or around the same locations, these markets were presumably erected after the prior marketplaces had ceased to exist. Governor Kieft issued many series of regulations that would control trade. Outside of the markets, no shops were allowed to sell meat, fish, or fruit. Authorities required that food be sold strictly in designated markets. There were also several regulations created to protect the public; there were penalties for expired meat or stale bread, and many items had stamps that displayed their weight before they were sold. Every day was a “market-day” except Sunday, which was the day of rest. The markets were at several appointed locations. Over time the market places began to have structure and organization. Eventually, market places were so well supplied that the tables of New York were set with an abundance of the finest delicacies in every season (Singleton 1930).

## **Map 2.1**

### **Markets in 1695**

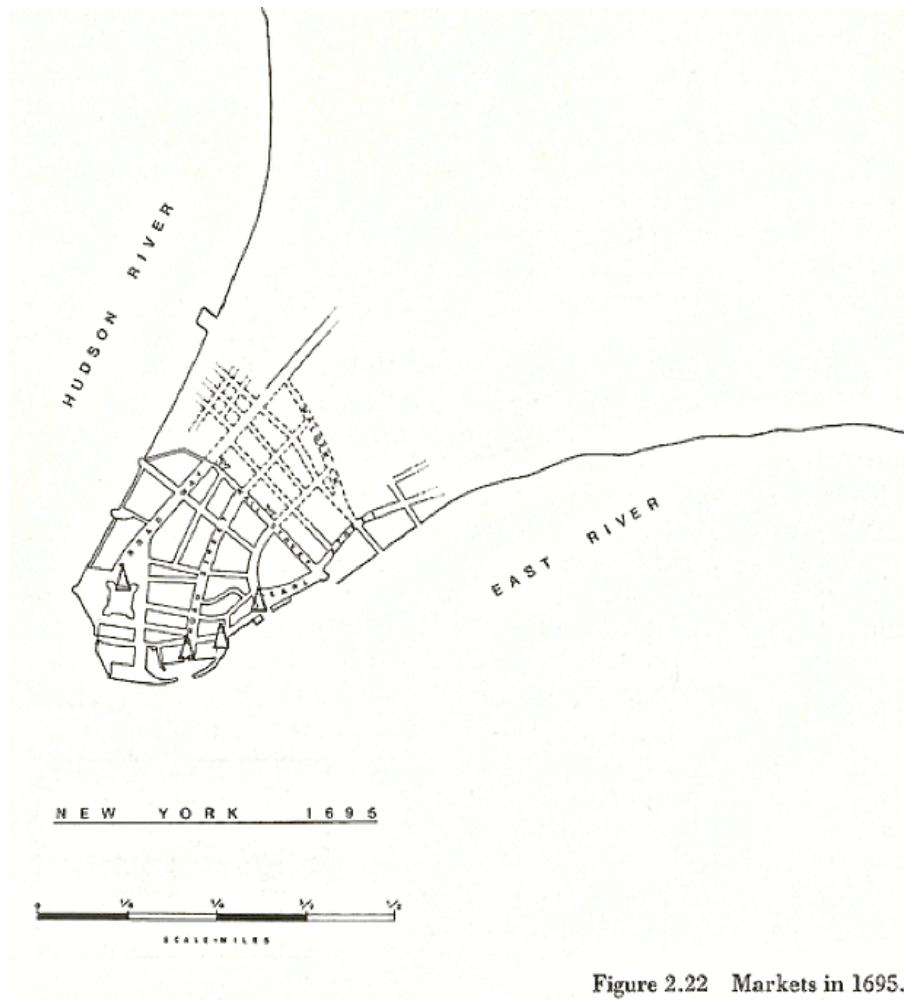


Figure 2.22 Markets in 1695.

(Rothschild, p. 60: Markets in 1695)

By 1661, according to Rothchild's map, there was at least one market located very close to the fort. New Amsterdam was still a small community, however, by 1695, three more markets appeared at the fort, at Broad Street, at Old Slip, and at Coenties Slip. The Old Slip market specialized in meats, while the Coenties market specialized in fish. Specialization of products indicates a development in market structure. However, these marketplaces differed in location than the primary market because they were concentrated along the East River. The placement of markets at the edge of Manhattan

Island infer that they were constructed to serve the needs of the merchants and the people who worked on the docks; they were not at the center of the town, catering directly to the residents. They were more efficient for the merchants rather than the consumers. These early marketplaces were outdoor stores; they eventually moved indoors in the eighteenth century (Rothschild 1990).

There were a few food shortages following the population boom. Because of the food shortage, attention was drawn toward bakers. The production of breaded materials was beginning to be heavily regulated; it was used as a staple food to avoid starvation in times of bad crops. Soon after the regulation of bread, other food markets were further developed, and regulated. In October of 1656, a meat market was officially established. Butchers were sworn in, and certified. Because specialization was required to slaughter meat, butchers charged for meat to make a living. Thus, organized markets came to exist.

In 1659, a baker and a butcher opened a shop in which they sold their specialized goods. There were three reasons why regulations of food became important in New York after the population exploded: there were several food shortages, there were plagues of diseases, and a more efficient way to feed a population was needed. Not only was food regulated, but the government also began to develop laws for sanitation. The biggest factor affecting the attention paid to sanitation was the Bubonic Plague in London in 1665. After this plague, people around the world began to notice the connection between dirt and disease, and disease and close contact (Duffy 1968). New York was turning into a highly organized place because of sanitation control and population growth. The regulations implemented created room for an internal food market to occur (keep in mind that at this time, the colonists were still receiving goods from Europe). The food market



in New York developed from the organization of food products. The development of these markets was caused by the same factors contributing to the urbanization in New York: population growth. Among the many marketplaces of Dutch New York, the three earliest ones have been documented in *The Market Book* (Voe 1970). The following case studies are devoted to exploring their framework.

#### **A. West India Company's Store**

This stone warehouse was located on Winkle Street (which was also known as Market Street), facing Fort Amsterdam. It consisted of five stone buildings, and was the first regularly appointed marketplace. Before its construction, the Lenape mainly supplied the inhabitants of New Amsterdam. At its beginnings, the store was not maintained well and many complained that the goods were overvalued and unfairly priced. The storekeeper, Ullrick Lupold was found corrupt, in fact. There was also much strife in the community because of daily complaints made about the theft of livestock.

When Peter Stuyvesant was appointed governor, he made many changes regarding these complaints. He put up proclamations in the public marketplaces that established several rules:

1. All inhabitants of New Netherland were required to fence their plantations, (which would control the problem of theft and robberies).
2. No person could keep a retail business unless they had taken an oath of allegiance to New Netherland and planned to reside in the area for at least four years.
3. Mondays were the official market days for all traders, which included the Lenape. Goods could be taken to the company store where they were sold or traded.

Stuyvesant helped the city become prosperous to the point where the influx of immigrants was so great, that the food supply was threatened. By 1653, there was a shortage of food. In order to control this situation, Stuyvesant enforced new regulations. The consumption of grain by brewers was forbidden and exporting grain became prohibited. Although the city felt drawbacks, Stuyvesant led New Amsterdam in as organized a fashion as he could (Voe 1970).

### **B. Market-Place at the Strand**

During the two-year period when the residents of New Amsterdam were faced with the food shortage, a new market place began to form. Instead of going to the Company's store, the traders chose to go to the shore of the East River to meet the market boats. Eventually, the East River shore meeting place (the "strand") became a popular location to trade, and a market was erected from Whitehall Street to the "Graft" canal at the bottom of Broad Street.

Market rules and regulations were soon required to keep up with an increasing population. Monday became the declared official market day because it came after the Sabbath on Sunday. However, people were not especially thrilled with this proposition because it meant that the goods had to be prepared on Sunday so they could sell them on Monday. Therefore, on September 12, 1656, Stuyvesant declared Saturday as the new market day. Markets would be held at the strand, where everyone was permitted to enter and buy or sell, but this soon changes.

By 1657, certificates of delivery were required for selling meat products that had to pass a farmer's inspection and required an accounted precise weight. Later, in 1658, a cattle market was erected near the strand - the specialization of this market allowed cattle

trade with New England to increase to the point where there was a demand for a ferry to run across Harlem River by 1667. The strand was successful until 1675, it was then replaced by another goods shelter that dominated for the next twenty years (Voe 1970).

### **C. Custom-House Bridge Market**

In 1675, Governor Andross proclaimed that a weekly market be erected at Pearl and Moore Street; this location was on the waterfront where the strand used to stand. The market would be open for business every Saturday for three years. The Custom-House Bridge Market was so successful that when it expired, there was a high demand to renew it with innovative regulations. Since the city had increased so much, more than one market day was designated. Fish, eggs, butter, fruits, and other goods could be sold on any day of the week. However, the merchants were obligated to account for an exact weight, the prices were strictly set, and punishment was enforced for the retail of stale food. There was also a person appointed to observe the marketplace and implement these regulations. Until 1703, the market house had been used as a store-house and center for trade but as more markets were erected, the custom-house became outdated and trade became less frequent until finally, in 1720, the Common Council of New York disposed of the house (Voe 1970).

These case studies reveal the increasing complexity of market organization that occurred during a time of population growth. Because of population growth, organized and regulated markets were necessary to avoid food shortages. The colonists were not hunter-gatherers and needed to be sure food was always available. Individuals began to invest in the market. Official “markets” and “market days” were established, and the

rules for buying and selling food became organized and complicated. By the late 1600s, New York City had developed complex markets not unlike the markets that exist today.

## **DISCUSSION**

Part of our results revealed an increase in the complexity of food technologies used during the colonial era. It appears that the Lenape and Dutch colonists' technologies were suited to their respective lifestyles, but there were shared technologies between the Dutch and the Lenape. One implication of these findings is that the more developed Dutch colonial food technology replaced many of the natural methods used by the Lenape. The data suggests that as trade increased between the two populations, it became more difficult for the Lenape to maintain their simpler way of life. Certainly, looking back at the evolution of New York City, we see the use of Dutch food technology such as plows and ovens more so than the use of bows, arrows, and shells. Therefore, the changes in food technology during the colonial era could be attributed to the population increase with the influx of settlers. It could also be attributed to the fusion of different cultures. However, the data does not account for the possibility of other social changes occurring within the Lenape and Dutch populations at the time. Increased tensions and rivalry between the Lenape and neighboring cultures such as the Mohawks and the Iroquian confederacy certainly could have altered their use of technologies. In addition, the transformation of New Netherland from a primarily trading company to an agricultural colony could also have impacted their use of technologies during this period.

Despite the change in food technology, food production in the New Netherland area did not change very significantly between 1500-1790. Before the settlement of the Dutch, there was little European influence in the region; thus, corn was the main crop. One can infer that the first century after the settlement of the Dutch, in 1614, was relatively monothematic in terms of farming. The Dutch frequently grew oats and corn, and continued to grow these things in their long inhabiting of the New Amsterdam area. Brooklyn became a major supplier of vegetables for the area, since grain was no longer a great profit producer. For some time, farming brought a great deal of revenue for the city. Additionally, there was a great boom of production some time after the creation of the Erie Canal because there was a larger trade market open for the little business savvy farmers of the New York City area to take advantage of.

Our results revealed that the marketplaces that formed in New Netherland did so in a very specific way. Other colonies came into existence for a multitude of reasons, but New York was founded on trade and commerce, thus, the markets that formed are distinct to the city. The findings suggest that that the food markets in New York City were fairly developed. The condition of the economy in New York City was complex as well. The settlers that colonized America were from fairly developed nations, and New York appeared to be fresh land in which they could implement new economic goals for success. New York seemed like a promising place in terms of economic capacity. The rate at which individuals were moving into and investing in the city allowed for New York to advance its food market system. The population growth and urbanization that occurred in this period called for a more complex means of trade.

Several concerns arose during the research for this chapter, but the greatest concern was the uncertainty of the accuracy of the research conducted during 1500 to 1790. Many of the researchers translated important documents from Dutch to English and as a result some information might have been misinterpreted. In addition, statistics from that time period may not have been as trustworthy as they are today. For example, we now use a more precise method of gathering and collecting information to be analyzed by computers. Now there are also censuses that record trends and changes in our population. Seventeenth century New York did not have such organized ways of storing data, so much of the information we have today may have been determined based on less reliable methods.

There is also a very limited amount of information on the Lenape that lived in New York before it was colonized. The relatively small amount of information we have about the way the American Indians lived before contact with European explorers does not explore every detail of their lives. The Lenape very well could have had complex markets; they could have had an advanced sanitation system and have been experiencing a period of economic growth and expansion. However, because we do not have detailed records of their culture before European contact, it is difficult to determine how they lived. Finally, the one flaw that may exist in the characterization of New York City is that there is not a detailed account of the trading system that existed before the Dutch settlement. The city may have already been prepared for an inevitable economic explosion and elaboration of markets upon the arrival of colonists, and one cannot be sure how economically advanced the region was before it experienced a population increase.

## CONCLUSION

This chapter assessed the changes in agriculture, food technology, and markets in New York City from 1500 to 1790. The history of New York City's agriculture, inhabitants, population changes, colonization, and economic activity provided specific information about changes over the colonial era. This information contributed insight on the contrast between Lenape and Dutch cultures as well as the impact of interaction on their lifestyles. Looking at this history, it is apparent that market development occurred at the same time as population growth because as more European settlers arrived, more formal markets were created. Both the Lenape and the Dutch focused on agriculture as a means of food production. There were few but gradual changes in the variety of crop that was cultivated in New York City from 1500-1790, however, there was great change in the scale of production and the locations in which agriculture was practiced. These changes are also attributed to the growth of the New York City population in correlation to the amount of food the citizens needed. As the population increased, a more elaborate method of food supply had to be constructed. Therefore, trade became a prominent part of pre-colonial life in New York, and the Dutch settlers strove to perfect their businesses by regulating the markets scattered along the perimeter of Manhattan Island. The English who took over New Amsterdam in the eighteenth century further developed the markets into fully functioning and well-established centers of commerce. Markets from 1500-1790 started out as elementary and became increasingly complex as time progressed.

Our findings demonstrated the simultaneous changes that occurred in population growth and market development during colonial New York City. In the early 1600s,

when Europeans settled and began to urbanize the lands, food markets were created; as the population of Europeans in New York increased, these food markets became more developed and regulated. Colonial New York City used more complex methods of food trade and regulation in order to properly accommodate its increasing number of residents.



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