

The American University in Cairo
School of Humanities and Social Sciences

FARM TO FORK: CAIRO'S FOOD SUPPLY AND DISTRIBUTION DURING THE
MAMLUK SULTANATE (1250-1517)

A Thesis Submitted to

the Department of Arab and Islamic Civilizations
in partial fulfillment of the requirements for
the degree of Master of Arts in Arabic Studies

by

Anthony Teke Quickel

Bachelor of Arts in International Studies

(under the supervision of Dr. Leonor Fernandes)

May/2015

The American University in Cairo

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DEDICATION

To my parents...

...for seeing what I saw, believing in that vision, and for never saying “no” to buying me books.

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ABSTRACT

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The wealth of Cairo's markets throughout the Mamlūk period is well attested in the sources. From roving peddlers to stationary markets, the city's food supply was a testament to Egypt's agricultural bounty. This study attempts to understand the food economy that provisioned these food markets. In doing so, Egypt's agricultural production, its transportation network, distribution system, and Cairo's markets are discussed with a focus towards understanding both the nature of the many aspects of the Mamlūk food economy as well as the changes occurring within it. In providing an overall description of the mechanisms by which the Mamlūk food economy functioned, this thesis argues that the structure of the system was an ongoing dialectic between the labor and efforts of the peasants, the activities of the food merchants and sellers, and the contrivances of those with power, especially the Mamlūk regime itself. The complexities of this system were not only influenced by the activities of these three groups but were also driven by environmental and geographic factors as well. When all of these factors worked in concert, an intricate, multi-layered system produced the abundance and wealth of Cairo's markets that were evident for all to see. However, the effects of the plague, starting in the fourteenth century CE, combined with the labor-intensive nature of the Egyptian agricultural and transportation systems disrupted this multiplex system. The agricultural sector being key to the overall Mamlūk economy, this breakdown created the conditions from which the agricultural system and, correspondingly, the economy failed to recover.

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NOTE ON TRANSLITERATION, TRANSLATION, AND DATING

This thesis utilizes the transliteration system of the *International Journal of Middle East Studies (IJMES)* and is easily available through the journal's website. The following is a brief overview of the way in which Arabic letters have been rendered into the Latin alphabet and includes notes on certain grammatical issues related to transliteration. It should be noted that *IJMES* uses a modified *Encyclopedia of Islam* transliteration system.

Consonants

ء	'	ز	z	ق	q
ب	b	س	s	ك	k
ت	t	ش	sh	ل	l
ث	th	ص	ṣ	م	m
ج	j	ض	ḍ	ن	n
ح	ḥ	ط	ṭ	ه	h
خ	kh	ظ	ẓ	و	w
د	d	ع	ʿ	ي	y
ذ	dh	غ	gh	ة	ah ¹
ر	r	ف	f	ال	²

1 – In construct state: at. 2 – for the article al- and -l-.

Vowels

Long	ا	ā
	و	ū
	ي	ī
Short	ـ	a
	ـ	u
	ـ	i

The following are several guidelines to the transliteration of certain grammatical devices as per the format for transliteration followed by the *International Journal of Middle East Studies*:

- 1) The definitive article al- is lowercase everywhere, except when the first word of a sentence.
- 2) Inseparable prepositions, conjunctions and other prefixes are connected with what follows by a hyphen. Ex. bi-, wa-, li-, la-
- 3) Elision – When one of the above prepositions or conjunctions is followed by al-, the A elides, forming a contraction rendered as wa-l-, bi-l-, li-l-, and la-l-.
- 4) Place names and names of political leaders or cultural figures are found with the accepted English spellings and are in accordance with English norms, including cities of publication.
- 5) Arabic book titles are in italics, and with an English translation of the title – when available – in parentheses. The first major term in the title is capitalized, with subsequent words being lowercase.

Note on Translation:

This thesis provides translations of all texts quoted when the source material is written in Arabic. If a standard and accepted translation of the text is available, that translation will be used in place of my own. French source material is left in its original.

Note on Dating:

Dates will be given using both the *Anno Hegirae* (AH), *Hijri*, and Common Era (CE) dating systems. In the text, the dates will be given in an AH/CE order with the abbreviations omitted. When full dates are available, they will be given with the Islamic month, followed by the *hijri* year, the Gregorian month, and then Common Era year. Hence, the dating of the Battle of Marj Dābiq, in which the Mamlūk Sultan al-Ashraf Qānṣuh al-Ghūrī was defeated by the Ottoman Sultan Selīm I, is rendered 25 Rajab 922/ 24 August 1516. If only the year is provided, the dating will be thus: 922/1516. For the lives of authors and other figures, dates will be provided for birth and death when available. Birth years will be indicated as *b.*, the year of death as *d.*, and reigns of rulers will follow *r.*

ACRONYMS

The following is a list of acronyms applied in citations for journals, collections of essays, and texts frequently cited:

<i>AI</i>	<i>Annales Islamologiques</i>
<i>Badā'i'</i>	Ibn Iyās, <i>Badā'i' al-zuhūr fī waqā'i' al-duhūr</i> , 5 vols.
<i>Husn</i>	al-Suyūṭī, <i>Husn al-muḥāḍarah fī tārikh miṣr wa al- qāhirah</i> , 2 vols.
<i>IJMES</i>	<i>International Journal of Middle East Studies</i>
<i>al-Intiṣār</i>	Ibn Duqmāq, <i>Kitāb al-intiṣār li-wāsiṭat 'iqd al-āmṣār</i>
<i>JAOS</i>	<i>Journal of the American Oriental Society</i>
<i>JESHO</i>	<i>Journal of the Economic and Social History of the Orient</i>
<i>Khiṭaṭ</i>	al-Maqrīzī, <i>Kitāb al-mawā'iz wa-l-i'tibar bi-dhikr al-khiṭaṭ wa-l-āthār</i> , 2 vols.
<i>Kitāb al-minhāj</i>	al-Makhzūmī, <i>Kitāb al-minhāj fī 'ilm kharāj miṣr</i>
<i>MSR</i>	<i>Mamluk Studies Review</i>
<i>Ṣubḥ</i>	al-Qalqashandī, <i>Ṣubḥ al-a'sha fī ṣinā'at al-inshā'</i> , 16 vols.
<i>Sulūk</i>	al-Maqrīzī, <i>Kitāb al-sulūk li-ma'rifat duwal al-mulūk</i> , 4 vols.
<i>Zubdah (I)*</i>	al-Zāhirī, <i>Kitāb zubdat kashf al-mamālik wa bayān al-turuq wa-l-masālik</i> . Paris: 1894.
<i>Zubdah (II)*</i>	al-Zāhirī, <i>La zubda kachf al-mamālik</i> . Beirut: 1950.

*This thesis uses two editions of al-Zāhirī's *Kitāb zubdat kashf al-mamālik*. The two editions are distinguished by roman numerals, as indicated above.

INTRODUCTION

The richness of Cairo's markets throughout the medieval period, for victuals and otherwise, delighted and amazed foreign visitors and was a source of pride and satisfaction for its local inhabitants.¹ Both the accounts of travelers and the annals of the great Mamlūk chroniclers attest to the wealth and splendor of medieval Cairo's marketplaces. The abundance of the city's commerce was not, however, only relegated to its luxury items. Repeatedly in the sources, there is acclaim for Cairo's edible bounty. From Cairo's markets and peddlers to Egypt's verdant Nile valley, the country's agricultural output has always been a source of fascination throughout its history, and the Mamlūk period was no exception.

While visiting Egypt in 1384 CE as part of a journey through the Holy Lands, the Italian traveler Frescobaldi recounts, "the imperial city of Cairo has plenty of every good thing especially of spices and every victual... In the city there are very many cooks who cook outside in the street by night and by day, in great caldrons of copper, the finest and good meals."² The Egyptian chronicler al-Maqrīzī (765-846/1365-1442) likewise attests to Cairo's abundance with two short narratives. In one he tells that during a summer night in Ramaḍān, his neighbor's slave went with a friend to the market in Bayn al-Qaṣrayn. There they saw large displays of watermelons and cheese. So rich were the markets, al-Maqrīzī says, that they were able to steal twenty watermelons and thirty pieces of cheese without drawing the attention of the shopkeepers.³ One must ask, however, how two people could carry twenty watermelons! Additionally, al-Maqrīzī states that in 792/1390

¹ A discussion of the travel logs of various foreign visitors to Cairo can be found in the literature review below. These visitors included European pilgrims on journeys throughout the Holy Land as well as merchants. Additionally there were also Arab visitors, discussed below.

² Leonardo Frescobaldi, Giorgio Gucci and Simone Sigoli, *Visit to the Holy Places of Egypt, Sinai, Palestine and Syria in 1348, by Frescobaldi, Gucci & Sigoli*, trans. by Theophilus Bellorini and Eugene Hoade, ed. by Bellarmino Bagati, (Jerusalem: Fransiscan Press, 1948), 49.

³ Taqī ad-Dīn Aḥmad ibn 'Alī al-Maqrīzī, *Kitāb al-mawā'iz wa-l-i'tibar bi-dhikr al-khiṭaṭ wa-l-āthār*, 2 vols, (Cairo: Būlāq, 1853–1854; repr. Cairo: Maktabat al-Thaqāfah al-Dīniyyah, 2000), 2:29.

the chief judge (*qāḍī al-quḍah*) al-Karākī entered Cairo with some of his acquaintances. On coming upon a market they were shocked by its swarming crowds and enquired as to whose wedding was occurring. They were informed, to their astonishment, that there was no festivity, but rather people were buying their daily provisions.⁴ Countless other examples attesting to Cairo's plentiful and multifarious markets abound and where appropriate will be utilized throughout this thesis. For the moment, it suffices to say that where the sources may quibble and contradict each other on various issues, there is near unequivocal unanimity on the wealth of Cairo's markets and the bounty of its foods throughout the Mamlūk period.⁵

With such immense and varied food provisions and the large population that it served, one must ask certain questions: From where was this food coming? How and where was it sold? What were the mechanisms and systems by which food was brought to and distributed amongst the markets? How did this system of food distribution change during the two and a half century reign of the Mamlūks? And finally, what brought about these changes? This thesis seeks to answer these questions and in so doing draws several conclusions. Briefly, the markets of Cairo, both selling commodities and comestibles, were located throughout the city in a regular and systemized pattern. Food distribution occurred not haphazardly but as the result of a highly structured and complex process. And lastly, the entire food system, from planting and harvesting to transportation and sale, underwent dramatic transformations during the Mamlūk period and was not a static, unchanging entity.

In providing an overall description of the mechanisms by which the Mamlūk food economy functioned, this thesis argues that the structure of the system was an ongoing

⁴ Ibid.

⁵ Naturally, this statement precludes occurrences such as plague and famine, which were both fixtures of the period. These issues will be discussed throughout but especially in Chapter 4, where issues of shortages and price inflation will be explored.

dialectic between the labor and efforts of the peasants, the activities of the food merchants and sellers, and the contrivances of those with power, especially the Mamlūk regime itself. The complexities of this system were not only influenced by the activities of these three groups but were also driven by environmental and geographic factors as well. When all of these factors worked in concert, an intricate, multi-layered system produced the abundance and wealth of Cairo’s markets that were evident for all to see. However, the effects of the plague, starting in the fourteenth century CE, combined with the labor-intensive nature of the Egyptian agricultural and transportation systems disrupted this multiplex system. The agricultural sector being key to the overall Mamlūk economy, this breakdown created the conditions from which the agricultural system and, correspondingly, the economy failed to recover.

Both the way in which this thesis studies medieval Cairo’s food markets and the conclusions that it draws contribute to a growing body of research on food in the Islamicate world generally and the economic and urban history of Cairo specifically.⁶ The majority of scholarship regarding food in the Islamicate world has been related to the topic of food in literature and poetry, cuisine and its preparation, or foodways (i.e. the culture surrounding the consumption of food including etiquette and other social implications).⁷ These recent studies are a result of a shift away from “traditional” histories towards ones that focus on the subaltern or the marginal in society. This new direction in scholarship has led to an increased interest in the various aspects of the

⁶ This thesis makes use of the double adjectival term “Islamicate”, as proposed by Hodgson, over the more commonly used term “Islamic”. This is intended to reflect a society and “*culture*, centered on a lettered tradition, which has been historically distinctive of Islamdom the *society*, and which has been naturally shared by both Muslims and non-Muslims who participate at all fully in the society of Islamdom. For this, [this thesis has] used the adjective ‘Islamicate’.” The term Islamic, however, is restricted to the *religion* of Islam as practiced by Muslims. For a discussion of this dichotomy between Islamic and Islamicate, and the rationale for the usage of the latter term, see Marshall G.S. Hodgson, *The Venture of Islam: Conscience and History in a World Civilization*, vol. 1, (Chicago: University of Chicago Press, 1974): 57-60.

⁷ This corpus of literature is examined in detail in the literature review below.

mundane and routine experiences of the inhabitants of various societies and in wide-ranging time periods.⁸ This novel approach to history “from the bottom-up”, while underdeveloped in regards to Mamlūk studies, is a developing field. It is within the context of this approach that nearly all studies of food during the Mamlūk sultanate may be located. Subaltern studies are important in helping to complete the historical narrative whose framework has been shaped by traditional scholarship. Yet when applying only this historiographical lens towards examining a yet understudied aspect of a society during a particular historical period, many issues connected with the topic of interest are left either in the periphery or completely outside of the researcher’s field of view. This is the state of the great majority of the work conducted on the issue of foodstuffs in Cairo during the Mamlūk Sultanate (1250-1517 CE). Thus it is a goal of this present study to partially rectify this imbalance of focus.

Another consequence of the conclusions of this thesis is with regards to the economic history of Cairo and urban studies in the Islamic world generally, especially with regards to the concept of the “Oriental, Islamic, or Muslim” city. While there is a certain body of economic literature devoted to the Cairo’s grain supplies, little has been written about food commodities more broadly. Additionally, as this thesis attempts to explain both the structured transportation of goods and the spacing of the markets, it

⁸ The rise in interest in subaltern history and with presenting a “total history” of the Islamic world region is an outgrowth of the work of the Annales School, which is exemplified by the work of Fernand Braudel, particularly his *The Mediterranean and the Mediterranean World in the Age of Philip II*. The influence of the Annales School on later regional histories has helped to spur the rise of subaltern histories or “history from the bottom up.” On this topic, see: Gayatri Chakravorty Spivak, “Can the Subaltern Speak?,” in Cary Nelson and Lawrence Grossberg (eds) *Marxism and the Interpretation of Culture*, (London: Macmillan, 1988). The works of Boaz Shoshan, Jonathan Berkey and Nelly Hanna highlight the usefulness of subaltern or “everyday” histories in both exploring the mundane experiences of the city’s inhabitants while also expanding upon broader more “traditional” scholarship. See: Boaz Shoshan, *Popular Culture in Medieval Cairo*, (Cambridge: Cambridge University Press, 2002); *Popular Preaching and Religious Authority in Medieval Islamic Near East*, (Seattle: University of Washington Press, 2001); and, Nelly Hanna, *In Praise of Books: A Cultural History of Cairo’s Middle Class, Sixteenth to Eighteenth Centuries*, (Syracuse: Syracuse University Press, 2003).

strives to challenge prevailing views within the field regarding the “Oriental” city. Because these studies have done much to contribute to prevailing scholarship on the urban history of the region and have only recently been challenged, it is advantageous to briefly discuss this older tradition of scholarship here. In so doing, it is hoped that the reader will bear this vein of scholarship in mind while reading this thesis and then better understand the ways in which the arguments herein undermine this tradition and contributes to the growing body of scholarship on the urban history of the region.⁹

The majority of the scholarship contributing to the formation of the notion of an Oriental city-type is of a French, Orientalist origin.¹⁰ These studies generally focused on the cities of North Africa, especially in the French colonial possessions, i.e. present-day Morocco, Algeria, and Tunisia.¹¹ A very limited few, mostly conducted by Jean Sauvaget, also discussed the cities of Syria, especially Aleppo.¹² Out of these studies several generalizations emerge that formed the basis of later scholarship on the “Oriental” city. The two markers of the Islamic city most relevant to this thesis are seemingly contradicting: Oriental cities are physically random, haphazard, unorganized while at the same time are formed and designed to organize society around the religious injunctions unique to Islam.¹³ The reason for this discord in generalizations is that while the Orientalist model promotes the notion of Islamicate cities being in labyrinthine disarray,

⁹ Among recent scholarship challenging the notion of the Islamic/Oriental city model, André Raymond’s work on Cairo’s urban history is the most prominent and relevant to the issues discussed within this study. See, André Raymond, *Cairo: City of History*, (Cairo: The American University in Cairo Press, 2001).

¹⁰ For discussions of this scholarship, see: André Raymond, “Islamic City, Arab City: Orientalist Myths and Recent Views,” *British Journal of Middle Eastern Studies*, vol. 21, no. 1 (1994): 3-18; Janet L. Abu-Lughod, “The Islamic City – Historic Myth, Islamic Essence, and Contemporary Relevance,” *IJMES*, vol. 19, no. 2 (May, 1987): 155-176; Ira M. Lapidus, *Muslim Cities in the Later Middle Ages*, (Cambridge: Cambridge University Press, 1984): vii-ix; Nimrod Luz, *The Mamluk City in the Middle East: History, Culture, and the Urban Landscape*, *Cambridge Studies in Islamic Civilization*, (Cambridge: Cambridge University Press, 2014): 13-20.

¹¹ Abu-Lughod, “The Islamic City,” 157, 159.

¹² *Ibid.*, 159.

¹³ Raymond, “Islamic City, Arab City,” 6; Abu Lughod, “The Islamic City,” 156-157.

it also needed to find a comprehensive way of distinguishing the eastern city from its occidental counterpart and to explain the city in light of Islam as a social force. In so doing, it argued that Islam, as the organizing mechanism of life in the Orient, also ordered the city. Abu-Lughod quotes the French orientalist Georges Marçais at length on this point because this section forms the basis of most other Orientalist scholarship on the city and is also quoted or paraphrased in most subsequent works:

“I have said that the center was occupied by the Great Mosque, the old political center, the religious and intellectual center of the city... Near the mosque, the religious center, we find the furnishers of sacred items, the suq [sic] of the candle sellers, the merchants of incense and other perfumes. Near the mosque, the intellectual center, we find also the bookstores, the bookbinders and, near the latter, the suq of the merchants of leather...”¹⁴

This framework for organization thus places Islam as the locus from which all other ventures radiate, in this case represented by the spatial location of various activities in relation to the Great Mosque. Thus, taken together, the traditional conception of the Oriental city is one in which rational planning and systemization only occurs in relation to Islam and all other activities are irrational, unplanned, and haphazard.

While certainly some market locations were positioned in reference to the Great Mosque, or religious structures generally, this is not necessarily proof of urban planning with an Islamic reference. Instead, it shows that merchants applied the business maxim, “location, location, location” to the act of establishing their markets throughout the city. Religious paraphernalia, for example, was sold near the mosque. Similarly, this thesis argues that the organization of food related activities was structured on the basis of rational planning in relation to supply and distribution. This argument has been made

¹⁴ Abu Lughod, “The Islamic City,” 156-157.

with regards to other commercial and residential activities in recent scholarship but not overall to the sale of foodstuffs.¹⁵

PARAMETERS AND DEFINITIONS OF TERMS

Before continuing to the body of this thesis, it is important to define the particular parameters that set the chronological and geographical limits of this study. Furthermore, some key terms, used throughout, require definition because of their general ambiguity or particular usage.

While setting historical parameters is always arbitrary to varying degrees, it is necessary for limiting the scope of the subject discussed. As such, the historical period for which this thesis deals is broadly 648-923/1250-1517, i.e. the reign of the Mamlūk Sultanate. It is important to note that these starting and end dates are based on specific political events: 648/1250 (the accession of al-Mu'izz Āybak to the sultanate on the death of the Ayyubid sultan Ṣalīh Najm al-Dīn Āyyūb)¹⁶ and 923/1517 (the end of the Mamlūk Sultanate and the start of Ottoman sovereignty over Egypt).¹⁷ These political changes represent the beginning and end of a specific political order, that of the Mamlūk system. These dates should not be understood, however, to represent breaking points in the historical continuum completely disconnected from that which preceded and succeeded them. More precisely, the Mamlūk order was institutionalized under the Ayyubid dynasty that preceded it, and it continued to exist and function, even if only nominally, in some form until the early nineteenth century. As such, it would be foolhardy to view the given dates, demarcating the parameters of this thesis, as creating a unit in history diverged from the historical timeline and operating in a vacuum.

¹⁵ The physical spacing and patterns of various commercial activities is discussed by André Raymond in *Artisans et Commerçants au Caire XVIII^e Siècle* vol. 1, (Damascus: Institut Français de Damas, 1973-1974): 307-372. While Nelly Hanna discusses the successive rings of housing, i.e. wealthier residents in the center with poorer inhabitants on the periphery, in *Habiter au Caire aux XVII^e et XVIII^e Siècles*, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1991).

¹⁶ André Raymond, *Cairo*, 107.

¹⁷ *Ibid.*, 188.

Furthermore, it would be similarly unwise to assume that these fixed dates indicate drastic and immediate changes in the social, economic, and institutional structures of the sultanate. While change did occur during the two and half centuries of Mamlūk rule, it did not happen instantaneously with the rise or demise of the regime. Shifts did happen within the urban fabric and are critical to the arguments of this thesis. That said, the scrutiny paid to changing events or trends should not be interpreted as the author misrepresenting incremental occurrences over long breadths of time as being monumental or revolution.

Another important aspect that warrants mentioning is in regards to the scale and scope of the period. Just as one must be cautious in not treating the Mamlūk period as disjoined from the periods before and after it, care must be taken in not considering the Mamlūk sultanate as a monolithic and unchanging block throughout its two and a half centuries of existence. The city of Cairo, its inhabitants, and the ruling Mamlūk system underwent many changes throughout the period of study. Some of these changes were drastic and abrupt, being the result of edicts, natural disasters or other events of immediate effect; other developments evolved over time.¹⁸ As such, the period and the events occurring therein must be handled with attention and nuance and without sweeping generalization as is prone to occur in dealing with long historical periods. Furthermore, the transformations that occurred within society had important implications for the food economy. Understanding these changes within the context of the production, distribution, and supply of food to Mamlūk Cairo's inhabitants is a principal goal of this present study.

Having described the historical parameters by which this thesis is bound, it is also important to set the geographical limits in which the events and processes of this study took place. Broadly speaking, this thesis is focused on food distribution within Cairo and

¹⁸ For a thorough study of the changes, both abrupt and gradual, occurring in Cairo throughout the Mamlūk period, see: "Part Two: Medieval Cairo," in Raymond, *Cairo*, 111-188.

its environs. In this study Cairo is defined as the Fatimid walled city (al-Qāhira), Miṣr-Fuṣṭāṭ (Old Cairo), and Būlāq. Hereafter, Cairo will be used either for the conglomeration of the urban space or for the Fatimid city *intra muros* depending on context. Whereas, the use of Miṣr-Fuṣṭāṭ and Būlāq will be based on those locations to the exclusion of others.

Other critical geographical distinctions that require definition are the geographical regions of Egypt: Upper and Lower Egypt. A consequence of the unique, northerly flow of the Nile River, Upper Egypt is therefore the portion of the land south of Cairo; it may also be describe by its proper name: al-Ṣa'īd. As Cairo was located at the start of the Nile Delta, which fans outward and northward towards the Mediterranean Sea, this northern area is known as Lower Egypt or the Delta. This thesis utilizes all four of these terms.

Moving beyond these chronological and geographical parameters, it is important to define the usage of key terms related to the central topic of this thesis: food. For the sake of brevity, the terms “food” and “foodstuffs” in this inquiry are rendered to mean foods generally (this includes other synonyms, i.e. victuals, comestibles, edibles, etc.). Because this thesis is focused on food as commodities brought to and distributed within Cairo, the majority of the foodstuffs herein are mostly discussed in their raw state, i.e. honey before its usage in cooking. Some exceptions are to be made in that some foods were imported in both raw and semi-processed states (e.g. wheat, grain, flour) and others still were brought to Cairo in their finished state (e.g. dried fruits, jam, et al.). This thesis is not, however, concerned with the processes of preparing or cooking food, with a few exceptions. Neither is this study oriented towards “foodways”, which is defined here as the culture of “preparation, procurement, presentation, and consumption of food as practiced by a given population, as well as to environmental, cultural, social, political,

and economic aspects of these activities.”¹⁹ Following such a definition, etiquette, cookbooks, utensils, banqueting and similar topics and activities will not be of interest to this thesis except where they aid in illuminating the discussion at hand.

LITERATURE REVIEW

Primary Sources

Fortunately for posterity, the Mamlūk period has left behind many rich sources from which the contemporary observer may gain a glimpse into the daily life of medieval society. These sources are as varied as they are plentiful. In travel narratives, literature, and chronicles, a historian may learn about the ways in which the writers of that period observed and perceived the society around them. Other sources like manuals and *waqf* documents present the way in which their creators intended for society to function. In dealing with the sources, therefore, an important caveat must be made with regards to this dichotomy between prescriptive or normative sources and descriptive or positive sources. Some of the sources in the this thesis are either *ḥisba* manuals, chancery manuals, or *waqf* documents, in which their creators wrote with the goal of conveying an ideal situation, i.e. based either on religious, traditional, or ceremonial regulations or protocol; the author prescribed the course of action given a set of circumstances. These prescriptive or normative sources, however, often differed greatly from the reality of everyday practice. It is in the descriptive or positive sources that the observer may see how the author perceived society to actually function. Understanding this dichotomy must be met with one further caveat: the bias or background of the writer. Even in the case of positive sources, it is important to consider the context of the source’s creator, i.e. his social-economic position, religion, occupation, and ethnic background.

Chronicles

¹⁹ Paulina B. Lewicka, *Food and Foodways of Medieval Cairenes: Aspects of Life in an Islamic Metropolis of the Eastern Mediterranean*, (Leiden: Brill, 2011), ix.

The principal primary sources utilized by this thesis are the chronicles of the Mamlūk period.²⁰ These chronicles span both the breadth of the period under study and the scope of activities within the city and society generally. Furthermore, the majority of the chroniclers were of a privileged, literate class and generally always members of the *‘ulama*. As such, the viewpoint of the chronicler needs to be understood in relation to his socio-economic standing. Another important point to consider is that most of the chronicles include retellings of events that occurred before the authors’ lifetimes. In these cases, it is important to understand that the author is relying on earlier sources, although they do not always cite them, and so the historian must use caution in proceeding. The various chronicles are, however, some of the best portraits available into life in the city during the period. Furthermore, by corroborating the chronicles with other sources, a sharper, more accurate picture may emerge.

Of the chroniclers of the period, the most renowned is al-Maqrīzī, who presents the greatest opportunity to view the daily-life and goings-on of everyday Cairo. As a consequence, he is also the most studied. Writing at the beginning of the fifteenth century CE, al-Maqrīzī recorded both the magnificent and the mundane. His two works most relevant to this thesis, *Kitāb al-sulūk* and *al-Khiṭaṭ*, are treasure troves of descriptions of Mamlūk Cairo and its markets and streets.²¹ Accordingly, there are many references to food, food-sellers, and food markets. Further, al-Maqrīzī oftentimes references the places

²⁰ For excellent overviews of the primary source material from the Mamlūk period, especially regarding chronicles and annalistic material, and for historiographical commentary, see: Donald P. Little, *An Introduction to Mamluk Historiography: An Analysis of Arabic Annalistic and Biographical Sources for the Reign of al-Malik an-Nasir Muhammad ibn Qala’un*, (Wiesbaden: Franz Steiner Verlag GMBH, 1970); idem, “The Use of Documents for the Study of Mamluk History,” *MSR* 1, 1997: 1-13; Li Guo, “Mamluk Historiographical Studies: The State of the Art,” *MSR* 1, (1997): 15-43; Sami G. Massoud, *The Chronicles and Annalistic Sources of the Early Mamluk Circassian Period*, (Leiden: Brill, 2007).

²¹ Taqī ad-Dīn Aḥmad ibn ‘Alī al-Maqrīzī, *Kitāb al-sulūk li-ma’rifat duwal al-mulūk*, 4 vols. in 12 parts, (Cairo: Maṭba‘ah Dār al-Kutub, 1973); idem, *Kitāb al-mawā‘iẓ wa-l-i’tibar bi-dhikr al-khiṭaṭ wa-l-āthār*, 2 vols., (Cairo: Būlāq, 1853–1854; repr. Cairo: Maktabat al-Thaqāfah al-Dīniyyah, 2000).

from whence the food came. Another of al-Maqrīzī's works that is invaluable is *Ighāthah al-Ummah bi-Kashf al-Ghummah*.²² This work, which has been described as a chronicle of Egypt's famines, has been recently reevaluated with a focus of capturing the writer's original intent of chronicling those events most critical to the development of Mamlūk economic policy.²³ Furthermore, the *Ighāthah* contains criticism of the Mamlūk regime's handling of economic affairs, especially regarding issues of currency and food prices. Al-Maqrīzī's service as a *muḥtasib* (market inspector) served to elucidate his commentary and makes his *Ighāthah* indispensable.

Similarly, the chronicles of al-ʿAynī (762-855/1361-1451), Ibn Taghrībirdī (812-874/1409-1470), Ibn Iyās (852-930/1448-1524), Al-Suyūṭī (849-911/1445-1505), Khalīl al-Zāhirī, and others all offer portraits into various aspects of the city's life.²⁴ Ibn Taghrībirdī is particularly helpful because of his interest in economics, which includes "price changes on staple goods, crop yields, Nile fluctuations, and natural disasters," and because his "works are noteworthy for their candor and objective reporting."²⁵ Al-ʿAynī and Ibn Iyās are also good sources for the life of the city and the events affecting its inhabitants. Al-ʿAynī is particularly helpful as he, like al-Maqrīzī, served for some time as a *muḥtasib*, and that experience informs his works; furthermore, his chronicles are

²² Adel Allouche, *Mamluk Economics: A Study and Translation of al-Maqrizi's Ighāthah*, (Salt Lake City: University of Utah Press, 1999).

²³ John Meloy, "The Merits of Economic History: Re-Reading al-Maqrizi's *Ighāthah* and *Shudhur*," *MSR* 7(2), (2003): 183-203.

²⁴ Badr al-Dīn al-ʿAynī, *Iqd al-jumān fī tarīkh ahl al-zamān*, (Cairo: Dār al-Kutub wa-l-Wathāʾiq al-Qawmīyyah, 2010); Jamāl al-Dīn Yūsuf Abū al-Maḥāsin Ibn Taghrībirdī, *Al-nujūm al-zāhirah fī mulūk miṣr wa-l-qāhirah*, 16 vols., (Cairo: Dār al-Kutub wa-l-Wathāʾiq al-Qawmīyyah, 1996); Muḥammad ibn Aḥmad Ibn Iyās, *Badāʾiʾ al-zuhūr fī waqāʾiʾ al-duhūr*, 5 vols., (Cairo: Dār al-Kutub wa-l-Wathāʾiq al-Qawmīyyah, 2009); Ḥāfiẓ Jalāl al-Dīn ʿAbd al-Raḥman al-Suyūṭī, *Husn al-muḥāḍarah fī tarīkh miṣr wa al-qāhirah*, (Cairo: Dār al-Fikr al-ʿArabī: 1998); Gharas al-Dīn Khalīl ibn Shāhīn al-Zāhirī, *Kitāb zubdat kashf al-mamālik wa bayān al-turuq wa-l-masālik*, ed. by Paul Ravaisse, (Paris: Imprimerie Nationale, 1894).

²⁵ Carl Petry, *The Civilian Elite of Cairo in the Later Middle Ages*, (Princeton: Princeton University Press, 1981), 11.

considered to be among the most sound regarding the events of the *baḥrī* period.²⁶ Khalīl al-Zāhirī's *Kitāb zubdat kashf al-mamālik wa bayān al-turuq wa-l-masālik* is also extremely helpful for its portrait of Egypt's administrative and economic apparatus during the period.

Waqf Documents

Another excellent source of information is the available and published *waqfiyyāt* of the period. A *waqf* defines the process by which land or property is given up by its owner, but substantively remains intact as an endowment, in order to continue to produce revenue that can be used in maintaining and providing for a purpose chosen by the original owner.²⁷ In this way, a benefactor divests himself of a property in order that the proceeds from that property be used in perpetuity for the benefit of a charitable cause.

In achieving this end, *waqf* documents prescribe the ways in which revenue is to be acquired, such as the selling of produce from *waqf* landholdings in specific commercial structures. This sale then generates revenue for the support of the endowment's designated, charitable end. Thus, the *waqfiyyāt* are important to understanding a major sector of the commercial activities of the Mamlūk city.

Literature and Travel Narratives

References to food in various literary sources also yield information about the foodstuffs bought and sold in the city as well as mentions to their points of origin and their related socio-economic status. This is especially true if references are made to "famous" foods from a specific area of high repute. One particularly poignant example of literature serving to illuminate the issues at the heart of this study is a manuscript

²⁶ Massoud, *The Chronicles*, 39-44.

²⁷ R. Peters, Doris Behrens Abouseif, D.S. Powers, A. Carmona, A. Layish, Ann K.S. Lambton, Randi Deguilhem, R.D. McChesney, G.C. Kozłowski, M.B. Hooker, J.O. Hunwick, "Waqf," *Encyclopaedia of Islam, Second Edition*, ed. by: P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs, Brill Online, 2015, Reference, American University in Cairo. Also, see: Muḥammad Muḥammad Āmīn, *Al-awqāf wa-l-ḥayāt al-ijtimā'iyah fī miṣr, 648-923/1250-1517*, (Cairo: Dār al-Nahḍat al-'Arabīyyah, 1980).

describing a hypothetical and literary “war” between the foods of the rich and the foods sold in the marketplace, which were associated with the poor.²⁸ This text, *Kitāb ḥarb al-m’ashūq bayna laḥm al-dā’n wa ḥawāḍir al-sūq*, was written by Aḥmad Ibn Yahya ibn Ḥasan al-Ḥajjar at some point in the fifteenth century CE. It appears to be the only text by the author – who was a Cairo resident of the period, and about whom very little else is known.²⁹ The source, through its imaginary war between the foods of the city, gives a litany of their names and places of origin and as such is invaluable to the purposes of this thesis. Furthermore, it offers suggestions to the correlations between certain foods and the socio-economic status of their consumers. In addition to the commentary provided with its translation, this manuscript is discussed in detail in an article by Paulina Lewicka whose other works are surveyed below.³⁰

A specific subset of literature that is also of great interest and value are the travel narratives of both European and Arab visitors to the city. Because of their foreignness, their attention to the details of daily life – that differ from that of their homelands – yields interesting tidbits about both how food was sold and what was being eaten. Among the European visitors to Cairo, the most useful travel narratives are those of the Cretan Emmanuel Piloti (1371-1420 CE), who resided in Alexandria; Arnold von Harff (1471-1505 CE), a knight from Cologne; and Leonardo Frescobaldi, Giorgio Gucci, and Simone Sigoli, three Italians who traveled throughout the Holy Land in 1384 CE.³¹

²⁸ I have used a translated and summarized text of Joshua Finkel based on a Damascene copy of the manuscript. See: Joshua Finkel, *King Mutton, a Curious Tale of the Mamluk Period*, “Zeitschrift für Semitistik und Verwandte Gebiete,” 8 (1932): 122-148 (I); 9 (1933-1934): 1-18 (II).

²⁹ Paulina Lewicka, “The Delectable War Between Mutton and the Refreshments of the Marketplace: Rereading the Curious Tale of the Mamluk Era,” *Studia Arabistyczne i Islamistyczne* 13, (2007): 20-29.

³⁰ *Ibid.*, 20.

³¹ Emmanuel Piloti, *Traité d’Emmanuel Piloti sur le Passage en Terre Sainte* (1420), ed. by P. H. Dopp, (Paris: Louvain, 1958); Arnold von Harff, *The Pilgrimage of Arnold von Harff, Knight, from Cologne through Italy, Syria, Egypt, Arabia, Ethiopia, Nubia, Palestine, Turkey, France, and Spain, Which he Accomplished in the Years 1496-1499*, trans. and ed. by Malcolm Letts

While Arab travellers may have shared a similar language to the inhabitants of Cairo, and in most cases a similar religion to the majority of Cairenes, they still marveled at the wonders of the city and their descriptions of the city's foods are plentiful. Two of these authors, who are of particular interest, are Ibn Baṭṭūṭa (703-779/1304-1377) and 'Abd al-Laṭīf al-Baḡhdādī (557-629/1162-1231).³² In both of their works the foods of the city are described. While al-Baḡhdādī's travel to Egypt comes a half a century before the rise of the Mamlūks, his chapter, "Foods Peculiar to Egypt," is especially helpful.

Hisba and Chancery Manuals

The *hisba* manuals of the period are another primary source of specific significance to this thesis. Written to give guidelines to the *muḥtasibs* of various cities, these sources present a normative and prescriptive description of the ideal ways in which food was to be kept and sold. Because of their prescriptive nature, they have to be used with caution, as they may not necessarily present the reality of the situation in markets but rather the ideal. The two most useful *hisba* manuals of the period for this thesis are those of Ibn al-Ukhūwwa (d. 648-729/1250-1329) and Ibn Bassām (dates unknown, probably mid-12th century CE).³³

As for the chancery (*dīwān al-insha'*) manuals of the period, al-Qalqashandī's (756–821/1355–1418) work is the most thoroughly studied and includes commentaries on the management of the city and state in addition to other insights regarding

(London: The Hakluyt Society, 1946); Leonardo Frescobaldi, Giorgio Gucci and Simone Sigoli, *Visit to the Holy Places of Egypt, Sinai, Palestine and Syria in 1348, by Frescobaldi, Gucci & Sigoli*, trans. Theophilus Bellorini and Eugene Hoade, ed. by Bellarimo Bagati (Jerusalem: Franciscan Press, 1948).

³² Ibn Baṭṭūṭa, *Riḥlat Ibn Baṭṭūṭa*, (Beirut: Dār al-Kutub al-'Almīyyah, 2002); 'Abd al-Laṭīf al-Baḡhdādī, *Riḥlat 'Abd al-Laṭīf al-Baḡhdādī fī Miṣr*, (Cairo: General Egyptian Organization for Books, 1998).

³³ Muḥammad ibn Muḥammad al-Qurashī ibn al-Ukhūwwah, *Ma 'ālim al-qurbah fī aḥkām al-ḥisbah*, ed. by Reuben Levy, (Cambridge: Cambridge University Press, 1938); Ibn Bassām al-Muḥtasib, *Niḥāyat al-rutbah fī talab al-ḥisbah*, ed. by Husām ad-Dīn as-Sammarā'i, (Baghdad: Matba'at al-Ma'arif, 1968).

administration.³⁴ Accordingly, al-Qalqashandī discusses various aspects of the Mamlūk agriculture system, drawing heavily upon the earlier Ayyubid text *Kitāb qawānīn al-dawāwīn* of Ibn Mammātī (ca. 541-606/1147-1209).³⁵ In addition to studying al-Qalqashandī's various references to food, his study of Egypt's agricultural system will be used comparatively with the Fatimid era work of al-Makhzūmī (512-585/1118-1189), whose *Kitāb al-minhāj fī 'ilm kharāj miṣr* served as a guide to the administrative procedures surrounding the agricultural system.³⁶

Taken together, the primary sources of the period present many opportunities for learning about the production, distribution and selling of foods in the city. Even so, no source can ever be understood to be an “objective” or “scientific” resource for presenting a “real” history but rather should be utilized with an understanding of both the bias of the author's background and his intended audience. Doing this and corroborating sources with one another helps to ensure greater accuracy in the presentation of both the sources and the reports gathered from them. After which the scholarship of others in secondary sources may enhance the foundation laid by a thorough examination of those at the primary level.

Secondary Sources

Amalia Levanoni's article “Food and Cooking during the Mamluk Era: Social and Political Implications” provides a thorough overview of the state of studies on food as a social activity with important societal and political implications.³⁷ After reviewing the

³⁴ Aḥmad ibn 'Alī al-Qalqashandī, *Ṣubḥ al-a'sha fī ṣinā'at al-inshā'*, 16 vols., (Cairo: Dār al-Kutub wa-l-Wathā'iq al-Qawmīyyah, 2010).

³⁵ Abu al-Makarim As'ad ibn Muhadhdhab ibn Mammātī, *Kitāb qawānīn al-dawāwīn*, ed. by Aziz Suryal Atiya, (Frankfurt: Institute for the History of Arabic-Islamic Science at the Johann Wolfgang Goethe University, 1943).

³⁶ Abū al-Ḥasan ibn 'Ūthmān al-Makhzūmī, *Kitāb al-minhāj fī 'ilm kharāj miṣr*, *Supplément aux Annales Islamologiques, Cahier N° 8*, ed. by Claude Cahen, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1986).

³⁷ Amalia Levanoni, “Food and Cooking during the Mamluk Era: Social and Political Implications,” *MSR* 9(2), (2005): 201-222.

status quo of scholarship on the topic, she sets out to discuss food and the rituals and social status surrounding it, i.e. table manners, its preparation, the use of utensils, etc. In doing so, Levanoni's article, while a valuable overview and starting point, focuses more on the societal activities surrounding food and its preparation and consumption than on the economic aspects of its trade and purchase, which is the main goal of this thesis.

Discussing various aspects of food and foodways in medieval Cairo, Paulina Lewicka's scholarship has been more voluminous than any other scholar on the subject. In addition to several articles, a book on food and food-related topics has recently, 2012, been published. As such, a survey of the corpus of her works is advantageous.

In a piece relatively associated with the topic of food and food distribution, Lewicka examines the preparation of food in Mamlūk Cairo via food vendors and public ovens and the related role of the market inspector, *muhtasib*, in ensuring quality.³⁸ The thrust of the article is that the inefficiency of the *muhtasib* and his deputies in carrying out their role and the craftiness of the merchants in their "cheating" meant that the quality of the food being purchased and consumed by Cairo's inhabitants was poor. As such, she argues, the inhabitants had little recourse but to prepare food at home and then have it cooked in communal ovens or else suffer poor food quality. While Lewicka does thoroughly introduce and discuss the use of the city's ovens and the role of the *muhtasib* generally, she seems to overstate the level of inefficiency by which the inspectors worked and the little recourse that the inhabitants of the city had in purchasing food. This may be a result of her overreliance on the travel narratives of foreign visitors to the city and compounded by a dependence on prescriptive/normative *muhtasib* manuals, which emphasize the corrective action that may be undertaken by a *muhtasib* in performing his duties. Further, she relies heavily on a treatise by the always scathing and puritanical Ibn

³⁸ Paulina Lewicka, "Twelve Thousand Cooks and a Muhtasib: Some Remarks on Food Business in Medieval Cairo," *Studia Arabistyczne I Islamistyczne* 10, (2002): 5-27.

al-Ḥājj (*d. ca. 737/1336*), *al-Madkhal ilā tanmiyyat al-a'māl bi-taḥsīn al-niyyāt*, who criticizes the faults and improprieties of the city's inhabitants and merchants almost to the point of zealotry. In doing so, she has taken the criticisms of one writer in the beginning of the fourteenth century to stand for the happenings of the entire Mamlūk period. In overstating the role of the *muḥtasib*, she has placed all agency in the hands of an officer of the sultan and removed it from Cairo's inhabitants themselves. It seems not at all unlikely that they would have argued with merchants for quality, purchased their food and goods from those with stronger reputations, and to a certain degree policed the goings-on of the markets.

While Lewicka's earlier article may lack nuance, it does provide a good overview of food; her other articles provide portraits of various aspects of food and food culture. All of them, however, discuss the consumption and traditions surrounding it rather than its actual production, importation, and distribution as this thesis attempts to achieve. As such, her article on alcohol provides an opportunity to survey the various fermented beverages sold in the city and serves as a starting point for surveying these foods' production and sale.³⁹ Her study of restaurants and taverns gives another overview of things being consumed in various eating spaces throughout the city but is also focused more on the way in which consumption occurred rather than on from where and how food was brought to the city initially.⁴⁰

Lewicka's recent book *Food and Foodways of Medieval Cairenes: Aspects of Life in an Islamic Metropolis of the Eastern Mediterranean* discusses food as it was prepared

³⁹ Paulina Lewicka, "Alcohol and Consumption in Medieval Cairo: The Story of a Habit," *Studia Arabistyczne i Islamistyczne* 12, (2004): 55-97.

⁴⁰ Idem, "Restaurants, Inns and Taverns that Never Were: Some Reflections on Public Consumption in Medieval Cairo," *Journal of the Economic and Social History of the Orient* 48(1), (2005): 40-91.

and consumed.⁴¹ It also explores with great detail the societal and cultural implications of certain food-related traditions such as table-manners and general etiquette. It, like all of the sources here mentioned, is a valuable resource to an understudied aspect of medieval Cairo, but similarly does not detail the ways in which the city was supplied with its food.

Another secondary work of particular value is an edited volume by David Waines.⁴² This book, *Patterns of Everyday Life*, generally deals with periods earlier than that explored directly by this thesis. It does, however, include discussion of foodstuffs, and, as such, is helpful in both serving as background and in helping to develop this thesis methodologically.

In all of the secondary scholarship reviewed, only one article seeks to achieve nearly similar goals to those of this thesis. Leonor Fernandes's article, "The City of Cairo and its Food Supplies during the Mamluk Period," discusses both what food commodities were being sold in the city's markets and also their places of origin.⁴³ Her article is not a complete index of these foods or their markets, nor does it extensively address all of the issues dealt with in this present study, but it is a thorough foundation on which this thesis builds. Furthermore, Fernandes's article discusses the issue of wheat at length. Of all of the crops of the Mamlūk period, wheat was supreme in terms of importance. That said, the issue has been thoroughly discussed, and this present study will not address the topic in detail.⁴⁴

⁴¹ Idem, *Food and Foodways of Medieval Cairenes: Aspects of Life in a Islamic Metropolis of the Eastern Mediterranean*, (Leiden: Brill, 2011).

⁴² David Waines, ed., *Patterns of Everyday Life*, (Aldershot: Ashgate, 2002).

⁴³ Leonor Fernandes, "The City of Cairo and its Food Supplies during the Mamluk Period," in *Nourrir les cites de Méditerranée*, vol. 2: *Consommation, marchés, institutions annonaires sous l'Ancien Régime*, ed. by Brigitte Marin and Catherine Virlouvet, (Paris: Maison méditerranéenne des sciences de l'homme, 2004): 519-538.

⁴⁴ For discussions of the topic of wheat in the Mamlūk economy, see: Eliyahu Ashtor, "The Wheat Supply of the Mamlūk Kingdom," *Journal of Asian and African Studies*, 18(3), (November 1984): 283-295; Yaacov Lev, "The Regime and the Urban Wheat Market," *MSR* 8(2), (2004): 149-161; Jennifer M. Thayer, "Land Politics and Power Networks in Mamluk Egypt," PhD diss., (New York University, 1993); Ira Lapidus, "The Grain Economy of Mamluk Egypt,"

This literature review is not intended to exhaustively discuss all of the secondary sources related to this issue of food; it does, however, discuss those which are most relevant to the present study and illustrate the existing need for continued work on the topic. This is especially true in relation to the issue of supply and distribution. Other sources that are roughly related to the subject do exist. These largely discuss trade in other commodities, critical foodstuffs such as grain and wheat, price-setting in the marketplace, and the markets generally. They may be reviewed in the bibliography alongside other works of relevance to the topic.

Journal of the Economic and Social History of the Orient, 12(1), (Jan., 1969): 1-15; Boaz Shoshan, "Money, Prices, and Population in Mamluk Egypt, 1382-1517," PhD diss., (Princeton University, 1978); and, idem., "Grain Riots and the 'Moral Economy': Cairo, 1350-1517," *The Journal of Interdisciplinary History* 10(3), (Winter, 1980): 459-478.

CHAPTER ONE: AGRICULTURAL PRODUCTION IN MAMLŪK EGYPT

In a section describing the produce, fragrances, fruits, and other victuals of Egypt, the chronicler and chief of the chancellery al-Qalqashandī quotes travelers in saying, “I have wandered around the majority of the globe of the earth and I have never seen [anything comparable to] Egypt’s waters in Ṭūbah, [its] milk in Āmshīr, [its] carob in Baramhāt, [its] roses in Baramūdah, [its] buckthorn (*nabīq*) in Bashans, [its] fig in Bu’ūnah, [its] honey in Ābīb, [its] grapes in Misra, [its] fresh dates (*ruṭab*) in Tūt, [its] pomegranate in Bābah, [its] banana in Hatūr, [its] fish in Kīyahk.”¹ By listing a wide variety of the edible attributes of Egypt with the Coptic months of their harvest, al-Qalqashandī presents a land partaking in a veritable, year-round feast.² Elsewhere he states, “if a wall was put around its land to separate it from other countries, [Egypt’s] inhabitants would feel rich compared to others, and would not even feel deprived of anything.”³ In a section in which he describes the harvest seasons of the crops of Egypt, al-Maqrīzī shares with his readers a similar calendar of foods: “wheat is grown from the middle of Bābah to the end of Hatūr... and lentils and chickpeas are grown from Hatūr until Kīyahk... and watermelons and kidney beans are grown from the middle of Baramhāt through the middle of Baramūdah... and almonds, peaches, and apricots [are planted in] in the water of Ṭūbah... and the winter bananas are grown in Ṭūbah and the summer [ones] in Āmshīr...”⁴ The statements of both chroniclers serve to illustrate the

¹ al-Qalqashandī, *Ṣubḥ*, III: 313. The Coptic month names here have been transliterated directly from al-Qalqashandī’s spellings in Arabic; transliteration may also occur based on the use of the Coptic alphabetical spelling.

² The Coptic calendar was utilized throughout Egyptian history as an agricultural calendar – a system from pre-Islamic Egypt that continued during the Islamic period. Throughout the sources of the medieval period, the Coptic months are used in describing various aspects of agricultural activity: planting, irrigation, harvesting. See, Table 1: Coptic Months and the Agricultural Year.

³ Fernandes, “The City”, 519; al-Qalqashandī, *Ṣubḥ*, III: 353.

⁴ This is only a small selection from a much larger and detailed discussion in *al-Khiṭat*; for the full text, see: al-Maqrīzī, *Khiṭat*, I: 101-103.

richness of Egypt's lands and the vastness of its agricultural productivity; and as this and the next chapter will show, the historical record concurs.

Starting this thesis with an overview of agriculture in the Mamlūk period is not just chronologically rational, in that anything produced must necessarily have started at a point of production, but also contextually logical. In understanding the massive undertaking of provisioning the medieval city, a discussion of agrarian production serves as a critical foundation from which a study of food commodities may occur. Furthermore, understanding this system of agriculture also serves as a background against which many of the critical issues of supply may be set, e.g. scarcity, famine, price changes, seasonality, etc.

More importantly, beginning with an examination of the Mamlūk agricultural system, especially with regards to production, demonstrates the extremely important role of the peasants and their labor in the cultivation of food crops. The work of maintaining and utilizing irrigation systems, tilling and sowing the land, rotating crops, and harvesting involved the constant efforts of Egypt's peasant class. This labor-intensive farming regime is even better understood within the context of the relationship between Egypt's environmental situation and the activities of the farming peasantry. A reliance on the Nile inundation for both water and nutrient-rich topsoil, gave rise to the specific system upon which Egyptian agriculture was based; a system that required a greater degree of labor input than one based in a rainy, temperate climate.⁵ Understanding this issue helps to explain the immense devastation to the food economy that occurred in the wake of the

⁵ In contrasting the effects of the plague on the agricultural systems of Egypt and England during the period, Borsch illustrates the many ways in which the environmental differences between the two climates resulted in different labor requirements. In the case of the rain-fed agricultural system, depopulation hardly effected production, but rather had important implications for England's manor farming system. In Egypt, on the other hand, the depopulation dramatically decreased the ability of the peasant population to cope with the demands of maintaining the irrigation system, which had drastic effects on the output of the food production system. See, Stuart Borsch, *The Black Death in Egypt and England: A Comparative Study*, (Cairo: The American University in Cairo, 2005): 35-36, 40, 52-53, 62, 123, 131.

massive depopulations following the plague, as will be discussed below. Furthermore, looking at environmental factors, appreciating how agricultural activity was conducted, and exploring the endeavors of Mamlūk Egypt's rural peasantry helps to develop an overall understanding of the various factors producing and influencing the Mamlūk food system.

In further examining these factors, having an appreciation for the system of agricultural production also facilitates discussions regarding the role of the Mamlūk regime within its organization. From basing taxation rates on land taxonomy and production to the timing of the harvest and its eventual transportation to Cairo, the ruling elite had an interest in the efficient and sustained functioning of the agricultural system. In surveying the various aspects related to production – especially the systems of irrigation and land usage – a better comprehension of the role of the Mamlūk regime within the overall food economy may be gained. Thus establishing a foundation in the issues related to agricultural production and the overall farming system provides the foundation on which the various other issues of this thesis may be discussed.

The patterns of agricultural production present in Egypt throughout the Mamlūk period were generally perpetuations of the processes of farming that occurred in preceding periods and which continued into the Ottoman period.⁶ This is not to say, however, that changes did not occur. The introduction of new crops (rice and sugar, among others), changes in irrigation technologies, the repercussions of the plague, and other factors did affect the system of Egyptian agriculture throughout the course of its history. The use of the Coptic calendar, certain farming implements and processes (plows,

⁶ Gladys Frantz-Murphy, *The Agrarian Administration of Egypt from the Arabs to the Ottomans*, Supplément aux Annales Islamologiques, Cahier N° 9, (Cairo: Institut Français d'Archéologie Orientale, 1986): 1; Boaz Shoshan, "Money," 8-10, 20; Hassanein Rabie, "Some Technical Aspects of Agriculture in Medieval Egypt," in *The Islamic Middle East, 700-1900: Studies in Economic and Social History*, ed. by A. L. Udovitch, (Princeton: The Darwin Press, 1981): 68-74.

hoes, threshing techniques), irrigation methods (Archimedean screws, shadoofs, dam and levy systems), and other aspects of farming were continuities from pre-Islamic Egypt; in fact, some continue until the present day.⁷ Thus, it is important to view agriculture in the medieval period as one of continuity, while at the same time appreciating that some changes were occurring that affected the nature of agriculture generally and the food economy specifically.

The nature of the changes that occurred during the Mamlūk period is still the subject of debate. The most studied factor in altering the agrarian system of Egypt was the recurrent outbreaks of the plague; this issue will be discussed in detail in relation to irrigation. Other factors such as the introduction of a new growing season, non-native crops, and novel irrigation techniques are less well studied. Most of the discussion of these factors, however, has been done within the context of a debate over the “Arab Agricultural Revolution”.⁸ More commonly referred to as the “Islamic Green Revolution,” the idea that the unique situation created by the Arab conquests facilitated a widespread distribution and cultivation of new crops throughout the Old World was proposed in the 1970s by Andrew Watson, among others. In this way, the spread of Islam inadvertently created an agricultural transformation in the region, and eventually, the globe.⁹

Under this hypothesis, Watson identifies India and Southeast Asia as the incubation centers for the vast majority of these crops.¹⁰ This incubation process allowed crops that favored wet, tropical climates to evolve receptivity to cultivation in the harsher,

⁷ Ibid.

⁸ Andrew M. Watson, “Arab Agricultural Revolution and Its Diffusion, 700-1100,” *The Journal of Economic History*, *The Tasks of Economic History* 34(1), (1974): 8-35; Idem., “A Medieval Green Revolution: New Crops and Farming Techniques in the Early Islamic World,” in *The Islamic Middle East, 700-1900*, ed. by Abraham Udovitch, (Princeton: Darwin Press, 1981): 29-58; Idem., *Agricultural Innovation in the Early Islamic World*, (Cambridge: Cambridge University Press, 1983).

⁹ Watson, “Medieval,” 29; Idem., “Arab,” 8-9.

¹⁰ Idem., *Agricultural*, 87-90.

desert climates of the Islamic world.¹¹ In some cases, these crops were not only capable of growing in the hotter, dryer climate but also flourished.¹² However, in order to accommodate the arrival of these new crops, the Arab regions had to adopt and develop new irrigation, fertilization, and farming techniques.¹³ This process, coupled with the rapid movement of ideas and goods within the relatively unified territorial space of the *Dar al-Islam*, meant an explosion of agriculture and a fecund environment for these new crop species.¹⁴ Watson's theory has implications not only for the newly introduced plant species but also for those extant crops already grown within the region for millennia. To this end, he argues that crop rotation, new technologies in irrigation, more effective fertilization techniques all led to more productive yields amongst all crops, new and old.¹⁵ His approach to agriculture throughout the early period has important implications for the current study. If his theory of an Arab Agricultural Revolution holds true, then much of the abundance and vitality of agriculture throughout the early medieval period in Egypt may be attributed to these processes. Watson, however, does have detractors who raise important issues regarding key aspects of his theory.

In a systematic critique of Watson's "Arab Agricultural Revolution", Decker discusses four of the crop species that were supposedly introduced into the region as per Watson's hypothesis: durum wheat, Asiatic rice, cotton, and artichoke.¹⁶ In each case, Decker argues that these crops were present, and in some cases prevalent, throughout the

¹¹ Watson, "Arab," 8; Idem., *Agricultural*, 4-5.

¹² Idem., "Arab," 8

¹³ Idem., *Agricultural*, 91-119.

¹⁴ Idem., "Arab," 21-22, 25.

¹⁵ Idem., *Agricultural*, 91-119.

¹⁶ Michael Decker, "Plants and Progress: Rethinking the Islamic Agricultural Revolution." *Journal of World History* 20(2), (2009): 187-206. Other critiques of Watson's "Islamic Green Revolution" hypothesis include Claude Cahen, "Review of *Agricultural Innovation in the Early Islamic World*, by Andrew Watson," *Journal of the Social and Economic History of the Orient* 29 (2) (1986): 217-219; and, J. Johns, "A Green Revolution?" review of *Agricultural Innovation in the Early Islamic World*, by Andrew Watson, *Journal of African History* 25 (1984): 343-344.

Islamicate world during Late Antiquity before the conquests of the 1st/7th century.¹⁷ In the cases of durum wheat, cotton, and Asiatic rice, Decker shows that all were grown in Egypt before the arrival of Islam and thus before a proposed Islamic Green Revolution.¹⁸ Furthermore, Decker briefly touches on the issue of the introduction of new irrigation and farming techniques by illustrating that in many cases the Umayyads and Abbasids reinvigorated and expanded pre-existing irrigation systems; this being especially the case in Mesopotamia where existing Sasanian hydraulic farming was restored under the early caliphates.¹⁹ Furthermore, as the Egyptian example shows, the most common irrigation methods utilized throughout the medieval period were continuations of pre-Islamic techniques, as will be discussed below.

Decker's repudiation of a number of Watson's proposed new crop species coupled with the continuation of a number of the irrigation techniques Watson considers novel, does much damage to his thesis. That said, much of his argument has been adopted by subsequent scholarship regarding the agricultural history of the Arab region in the medieval period. Thus, Watson's theory is an important contribution in giving context to the changing nature of farming activity within the Islamicate world during the medieval period. Even as this thesis does not attempt to settle the ongoing dispute over Watson's idea, discussing the debate helps to give context to the state of scholarship on agriculture in the medieval Islamicate world – a context in which the Mamlūk food economy is situated. Accordingly, while bearing in mind Decker's critique as a caveat, the concept of an Arab Agricultural Revolution provides an important backdrop to the immense and varied agricultural productivity occurring during the Mamlūk period.

¹⁷ Decker, "Plants," 187-206.

¹⁸ Ibid.

¹⁹ Ibid., 190.

Before moving on to an overview of agricultural production in medieval Egypt, it is worth mentioning a few points regarding farming tools and fertilization. As the major issue affecting the production of crops in Egypt was proper irrigation and as other studies have successfully discussed farming implements and techniques, this thesis will not attempt to discuss these latter issues in detail but rather is limited to issues of irrigation and soil types.²⁰ Rabie successfully has shown that the majority of farming tools and implements were continuations of pre-Islamicate devices, almost all of which being present in antique Egypt.²¹ Furthermore, in his study of the technical aspects of farming in medieval Egypt, Rabie also shows that the use of fertilizer was also a perpetuation of existing methods.²² These fertilizers were of two types: 1) dung (i.e. waste products from donkeys, horses, mules, and sheep) mixed with cinders from burnt refuse, and 2) mixed fertilizer (grass, straw, or other plant material mixed with the “earth of old ruined buildings”).²³ The fact that both the farming implements and fertilization techniques used in the medieval period were generally consistent with their pre-Islamicate predecessors shows the degree to which the agricultural economy was strongly established in Egypt, well before the Islamicate period. As will be discussed below, this was also certainly true for irrigation as well.

The immense importance of agriculture in the Egyptian economy throughout its history and the continuity of much of the established practices in agricultural production points to the degree to which these techniques had been developed and established and the centrality of farming activity within society. All of this, then, provides the background against which an overview of the agricultural activities of medieval Egypt may be

²⁰ For a comprehensive overview of various farming implements and fertilization methods, see Rabie, “Technical,” 72-75.

²¹ Ibid.

²² Ibid.

²³ Ibid., 73.

understood. Further, it helps to provide context towards understanding the immense undertaking and importance of provisioning Egypt specifically, and the empires to which the province belonged.

OVERVIEW OF AGRICULTURE IN MEDIEVAL EGYPT

The major factor that has determined the organization and system of agriculture in Egypt throughout its history is the Nile River. Because of its desert topography and its low rainfall, nearly all forms of agriculture are reliant on the river.²⁴ While some farming was conducted using wells or in oases, especially in the Fayoum, any sort of large-scale agriculture done beyond a subsistence level required complex irrigation works that utilized the Nile's water. Thus, Egypt's entire agricultural system was based around the fluctuations of the Nile and its annual inundation.

Devising a system of agriculture around the natural cycle of Nile flooding was predicated on the fluvial inundation cycle being regular and predictable. Summer monsoons in the Ethiopian highlands flooded the Blue Nile and Atbara River causing the river in Egypt to rise by an average of 6.4 meters.²⁵ The yearly minimum level of the river occurred just before the annual flooding at the beginning of June; the maximum level being reached around the end of September.²⁶ The waters generally would remain at their peak level for two weeks before beginning to recede again reaching their halfway level in the middle of November.²⁷ Because of this cycle, and the irrigation works built to exploit it, the crops that necessarily benefitted from fluvial irrigation were those planted in the winter (the division of winter and summer crops will be discussed below).

²⁴ Shoshan, "Money," 8-9; Rabie, "Technical," 59.

²⁵ Stuart J. Borsch, "Nile Floods and the Irrigation System in Fifteenth-Century Egypt," *MSR* 4, (2000): 131-132.

²⁶ *Ibid.*, 132; Shoshan, "Money," 10; Āmīn Sāmī Pāshā, *Taqwīm al-Nīl*. 2nd Ed, (Cairo: Dār al-Kutub wa al-Wathā'iq al-Qūmīyyah, 2002): 55.

²⁷ *Ibid.*

The receding river left behind a new layer of fertile topsoil carried by the flood from the Abyssinian plateau.²⁸ In order to catch both the receding waters and the alluvial residual, a complex and highly developed system of irrigation was constructed. Ironically, the very same flooding that provided the water and topsoil necessary for Egyptian agriculture also wreaked havoc upon existing irrigation works, and new constructions and repairs were required yearly to maintain the system.²⁹

From ancient times until the modern period, Egypt's system of irrigation utilized the receding floodwaters and gravity to capture water in basins and direct it through a series of canals and then ditches.³⁰ A network of canals, basins, and embankments were created in the spring of the year in preparation for the Nile flood.³¹ As the river rose, a canal would direct water into a sequence of basins using gravity. Once there, dykes were built in order to trap the water from receding. The removal of these dams would then allow water to flow in a controlled manner into the surrounding area. In some instances, water could be held in the basins for up to six weeks after the flood waters had subsided.³²

In addition to filling basins throughout Egypt's irrigational infrastructure, many canals also fed seasonal lakes and ponds, (*birkah* pl. *birak*).³³ Cairo had many such ponds and lakes, which were used for irrigation and pleasure alike.³⁴ These water bodies often stagnated during the course of the year but were annually refreshed by the inundation of the Nile and were fed by canals leading away from the river. In addition to supporting

²⁸ Borsch, "Nile Floods," 132; Shoshan, "Money," 10.

²⁹ Ibid.

³⁰ Borsch, "Nile," 132; Rabie, "Technical," 68; Shoshan, "Money," 12.

³¹ Rabie, "Technical," 68; Shoshan, "Money," 12.

³² Rabie, "Technical," 68; Shoshan, "Money," 12.

³³ Stuart P. Echols and Hala F. Nassar, "Canals and lakes of Cairo: influence of traditional water system on the development of urban form," *Urban Design International* 11, no. 3 (2006): 203-212. Also, see: Ibrāhīm ibn Muḥammad Ibn Duqmāq, *Kitāb al-Intiṣār li-wāsiṭaa 'aqd al-āmṣār*, (Cairo: La Bibliothèque Khédiviale, 1893; repr. Beirut: The Trading Office, 1983): 54-59; al-Maqrīzī, *Khīṭaṭ*, II: 161-165.

³⁴ Raymond, *Cairo*, 13, 222.

agriculture, these lakes and ponds were often the location of houses for the wealthy and summer retreats from the heat and crowdedness of the city.³⁵

The canals carrying water to these water-holding basins, the city's ponds, and those that led to culverts to divert water into land were all dammed until the river reached its plenitude – as marked by the reaching of fifteen cubits at the Rawḍah Nilometer.³⁶ A ceremony marking the plenitude was held every year at the Nilometer in conjunction with a ceremony marking the opening of the canal; several other holidays and ceremonies were similarly timed with the various movements of the river.³⁷ With the demolition of the temporary dams, water flooded the canals to be held in the basins and carried in the culverts, as described above.³⁸

The criticality of maintaining these irrigation systems was discussed at length by al-Maqrīzī.³⁹ He blamed the corrupt use of the tax monies collected for maintaining the dams, the cornerstone of the irrigation system, as a chief cause of the breakdown in agricultural production from the rule of the sultan Faraj ibn Barqūq (*r.* 801-8/1399-1405) onwards.⁴⁰ Likewise, Asadī declared that the first cause, among four others, of the decline

³⁵ Ibid., 98, 182, 218, 276.

³⁶ John P. Cooper, *The Medieval Nile: Route, Navigation, and Landscape in Islamic Egypt*, (Cairo: The American University in Cairo Press, 2014): 118.

³⁷ Ibid. Also see: Hoda Lutfi, “Coptic Festivals of the Nile: Aberrations of the Past?,” *The Mamluks in Egyptian Politics and Society*, ed. by Thomas Philipp and Ulrich Haarmann, (Cambridge: Cambridge University Press, 1998): 254-282. Paula Sanders gives an incredibly descriptive narration of the ceremony marking the opening of the canal during the Fatimid period with details on pomp, protocol, and ceremonial regalia, see: Paula Sanders, *Ritual, Politics, and the City in Fatimid Cairo*, (New York: SUNY Press, 1994): 112-126. Regarding several holidays related to the river's various conditions: for the holiday of Nawrūz, see: al-Maqrīzī, *Khiṭaṭ*, I: 269, 493; for the anticipation of a bad flood, see: al-Maqrīzī, *Sulūk*, III: 429, IV: 522, 531-532; for the breaking of the dam of the *khalīj*, see: al-Maqrīzī, *Khiṭaṭ*, I: 473, 476, II: 150; Idem., *Sulūk*, IV: 68, 397.

³⁸ Cooper, *Medieval Nile*, 119-120.

³⁹ al-Maqrīzī, *Khiṭaṭ*, I: 74-75.

⁴⁰ Ibid., I: 101.

in wealth in Egypt during the 9th/15th century was the neglect of the Mamlūk administration in maintaining the irrigation system and thus arable land.⁴¹

This abandonment, however, was probably more a result of depopulation following the recurring plague outbreaks of the 8-9th/14-15th centuries than of intended malfeasance.⁴² Scholarship on demographic effects on agriculture and economics during the later Mamlūk period is currently underdeveloped. Ashtor and Shoshan have shown decreasing food prices in the latter part of the 8th/14th century with major increases in the 9th/15th century.⁴³ In explaining the decrease in prices during the 8th/14th century, Ashtor argues: “as the Mamluks were great grain dealers and had the utmost interest in keeping prices high, there cannot be the slightest doubt that the downward trend [of food prices] corresponded to lower demand, and was the result of depopulation.”⁴⁴ Udovitch and Dols also argue this point; the latter writing, “the complex problem of the later Mamluk period remains largely a population problem.”⁴⁵ Shoshan states, however, that the demographic effects of the plague were disconnected to increased food prices in the 9th/15th century.⁴⁶ As a consequence, both Ashtor and Shoshan look to changes in the monetary policy of the Mamlūk regime throughout that century and draw conclusions accordingly, even if

⁴¹ Muḥammad ibn Muḥammad Asadī, *Al-Taysīr wa-l-i'itibār wa-l-tahrīr wa al-ikhtibār*, ed. by A. A. Tulaymāt, (Cairo: Dār al-Fikr al-‘Arabī, 1967): 92-93, (cited in Rabie, “Technical,” 62).

⁴² Borsch, “Nile Floods,” 137-139; ‘Imād Badr al-Dīn Abū Ghāzī, *Ṭaṭawwur al-ḥiyāzah al-zirā‘īyah fī miṣr zaman al-mamālīk al-jarākisah: dirāsah fī bay‘ amlāk bayt al-māl*, (Giza: ‘Ayn li-l-Dirāsāt wa-l-Buḥūth al-Insānīyah wa-l-Ijtimā‘īyah, 2000): 66-67.

⁴³ Shoshan, “Money,” 211; Eliyahu Ashtor, *A Social and Economic History of the Near East in the Middle Ages*, (Berkeley and Los Angeles: 1976): 306, 313, 315; Idem., *Histoire des prix et des salaires dans l’Orient médiéval*, (Paris: Service d’édition et de vente des publications de l’Éducation nationale, 1969): 455-56.

⁴⁴ Ashtor, *Social and Economic*, 315.

⁴⁵ Abraham Udovitch, “England to Egypt, 1300-1500: Long-term Trends and Long-distance Trade, IV: Egypt,” in *Studies in the Economic History of the Middle East from the Rise of Islam to the Present Day*, ed. by Michael A. Cook, (London: Oxford University Press, 1970): 117-119; Michael W. Dols, *The Black Death in the Middle East*, (Princeton: Princeton University Press, 1977): 280.

⁴⁶ Shoshan, “Money,” 217.

unsatisfactorily.⁴⁷ The direct connection of declining population to rising food prices in the 9th/15th century was made, however, by Borsch. Dols and Abū Ghāzī also shows how demographic problems as a result of the plague led to great reductions in cultivation.⁴⁸

Examining a sharp, steady rise in the Nile's minima and maxima in the 9th/15th century, Borsch shows that populations thinned by the plague in Upper Egypt decreased the ability to maintain labor-intensive irrigation systems in that region.⁴⁹ As a consequence, water that would have been diverted and utilized in basins in Upper Egypt continued its flow northward and thus registered higher levels at the Nilometer in Cairo.⁵⁰ Furthermore, these higher inundation levels throughout the century flooded and overwhelmed greater amounts of arable land in the Delta. With lower populations there as well, the entire system came under great strain.⁵¹ This unified theory of population, hydraulics, and the irrigation systems explains a decrease in lower crop yields and offers a very tenable explanation for the higher food prices witnessed throughout the 9th/15th century. Thus, initial depopulation in the 8th/14th century caused decreased demand, which drove down prices. Whereas, the same depopulation meant a decrease in the available labor force to maintain the irrigation system, which in the long-term caused lower crop yields and higher food prices in the 9th/15th century.⁵² These sorts of issues are important in understanding the broader picture of transformations in the Mamlūk food economy and also in understanding the nexus of agriculture and economy, an important issue in this study that will be further discussed later in this chapter.

⁴⁷ Ibid., 218-220; Ashtor, *Social and Economic*, 306, 313, 315; Idem., *Histoire*, 455-56. While there is little doubt that inflation occurred in the 9th/15th century, the sharp spike in food prices in the middle of the century does not reflect the overall inflationary trend. As such, their explanations are valid only to a certain extent, and demographic and structural changes in the economy are equally important to consider.

⁴⁸ Dols, *Black Death*, 159-162; Abū Ghāzī, *Taṭawwur al-ḥiyāzah*, 66-67.

⁴⁹ Borsch, "Nile," 137-138.

⁵⁰ Ibid., 134-135.

⁵¹ Ibid., 137-139.

⁵² Abū Ghāzī, *Taṭawwur al-ḥiyāzah*, 66-67.

Irrigation based on the flooding of the Nile and the natural flow of the water was referred to as “by run-off or flow” (*bi-l-sayḥ*) by Nābulṣī or relaxed water (*mā’ al-rāḥah*) by al-Maqrīzī.⁵³ These forms of irrigation, while labor intensive in the construction and maintenance of levies, dykes, and canals, were passive in that they were reliant on the natural forces of inundation. Other forms of active irrigation, however, existed. These methods required proactive effort on the part of the peasants to draw water from a source to its intended destination.⁵⁴

The most basic type of active irrigation was the carrying of water vessels or pots from a water source either by human or animal power. This method was known to have been practiced in the area of the Fayoum but was also practiced in other areas as well.⁵⁵ This method, however, was much more inefficient than the other four approaches of actively bringing water to agricultural areas.⁵⁶ These methods, which utilized artificial constructions rather than exploiting the natural process of flooding, were: the *naṭṭālah*, the *dāliyah*, the *sāqiyah*, and the *tābūt*.⁵⁷

The *naṭṭālah* is not mentioned in medieval sources but was used in both pre-Islamic Egypt and at the time of the *Description de l’Égypte*.⁵⁸ For such a continuity to happen, the *naṭṭālah* must have existed in the intervening period. The *naṭṭālah* involved two men standing apart from one another with a bucket hanging from a cord. The two individuals moved together to dip the bucket into a water source. They then walked apart

⁵³ ‘Uthmān al-Nābulṣī, *Tārīkh al-Fayyūm wa balādihi*, ed. by B. Moritz, (Cairo: al-Maṭba‘ah al-Ahlīyah, 1898): 63; al-Maqrīzī, *Khiṭaṭ*, I:102, (cited in Rabie, “Technical,” 68).

⁵⁴ Rabie, “Technical,” 68.

⁵⁵ *Ibid.*, 70.

⁵⁶ *Ibid.*

⁵⁷ *Ibid.* For greater detail about all of these irrigation systems, see Rabie, “Some Technical Aspects of Agriculture in Medieval Egypt,” 67-71.

⁵⁸ *Ibid.*, 70; “Arts et Metiers,” *État Moderne, Vol. 8, Description de L’Égypte ou Recueil des Observations et des Recherches Qui Ont Été Faites en Égypte pendant l’Expédition de l’Armée Française*, 2nd Edition, (Paris: CLF Panckoucke, 1823): Plate 6.

to draw the rope taught thus raising the water upwards before pouring it into an irrigation ditch to be delivered to the crops.⁵⁹

A *dāliyah*, also called a shadoof, consisted of a water container suspended from a counterbalanced arm that could then be dipped into the river, a canal, or a well. The *dāliyah* was prevalent not only in Egypt during medieval times but also in the ancient and modern periods; it was also present in medieval Iraq.⁶⁰ The counterweight allowed the filled bucket or pail to be easily lifted and poured into a trench.⁶¹

The *tābūt*, also known as the water screw or Archimedean screw, made its debut in Egyptian agriculture during the Ptolemaic period and continues its use into the present day.⁶² The Archimedean screw involves a large screw-like mechanism contained within a tubular, wooden cylinder. The inner screw is turned thereby rotating the water upwards away from the water source and depositing it in the desired irrigation ditch.⁶³ Because of its design, the *tābūt* is only effective when water levels are sufficiently high, limiting its usage to more permanent water sources.⁶⁴

A final method for artificially irrigating crops involved the use of water wheels to raise water out of canals and rivers and into fields. These devices took varying forms and names throughout the medieval period depending on their type and function. In the early medieval period, before the Mamlūk reign, Rabie notes that several authors refer to *dawālīb* (sing. *dūlāb*; from the Persian for water wheel) along the Nile used for raising water into orchards and fields.⁶⁵ These wheels were highly consistent with those described in the *Description de l'Égypte* at the end of the eighteenth century CE.⁶⁶ As

⁵⁹ Rabie, "Technical," 70.

⁶⁰ Ibid.

⁶¹ Ibid; "Arts et Metiers," *État Moderne, Vol. 8, Description*, Plate 6.

⁶² Rabie, "Technical," 72.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Ibid., 70-71.

⁶⁶ "Arts et Metiers," *État Moderne, Vol. 8, Description*, Plate 5.

such, the *dawālīb* must have been either predecessors to or very much the same as the two water-wheel types described in the Mamlūk period: the *sawāqī* (sing. *sāqiyah*) and the *maḥāl* (sing. *maḥālah*).⁶⁷ The terms *sawāqī* and the *maḥāl* are used throughout sources to describe wheels that raised water from riverbanks, wells, or canals to the ground level in order that water be distributed into irrigation ditches.⁶⁸ Rabie shows a differentiation between the two types in some sources: the *sāqiyah* being used to raise water from rivers and canals and the *maḥālah* lifting water from underground sources as a pulley.⁶⁹ In both cases, the wheels were often turned using animal-power, and the job of the peasant was to monitor the wheels progress and drive the animal to continuously turn its cog.⁷⁰

These various irrigation methods were critical to Egypt's agricultural economy, and the active irrigation of crops, outside of the traditional flooding season, allowed for multiple growing seasons that would otherwise not have been possible. Understanding the use of water in the complex system of food production is only one aspect of Egypt's farming system throughout the medieval period. In addition to a systematic and complex system of irrigation, medieval farmers also utilized expertise in various soil types in order to maximize output.

Rotating crops from one season to another, allowing arable land to fallow, and planting cover crops all served to prevent nutrients from leaching, to increase later productivity, to restore nutrients and fertility, and to protect long-term agricultural growth. These processes involved an advanced knowledge of the effects of various crops on the nutrient content of the land and also the ways in which fecundity could be restored.

⁶⁷ Rabie, "Technical," 71.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid., 72; "Arts et Metiers," *État Moderne, Vol. 8, Description*, Plate 5.

⁷⁰ Rabie, "Technical," 71.

As these soil types were directly related to crop productivity, land taxes were appraised accordingly.

SOIL TAXONOMY IN THE MAMLŪK PERIOD

The earliest Egyptian source for agrarian administration is the treatise of al-Makhzūmī's *Kitāb al-minhāj fī 'ilm kharāj miṣr*, which was written between the end of the Fatimid era and the beginning of the Ayyubid period (565-576/1169-1181).⁷¹ Compiling earlier administrative material and presenting various taxation classifications, al-Makhzūmī's work is the first in Egypt to specify various soil types.⁷² His soil classifications were compiled and expanded upon in the later Ayyubid period by Ibn Mammātī in his *Qawānīn al-dawāwīn*.⁷³ Ibn Mammātī's taxonomy, in turn, was commented upon and edited by the Mamlūk chief chancellor al-Qalqashandī and by the Mamlūk chronicler al-Maqrīzī.⁷⁴ Because of his role in the chancellery during the Mamlūk period, the soil typology present in al-Qalqashandī's *Ṣubḥ al-a'shā* is used here for the purposes of this thesis. Additional commentary from al-Maqrīzī is helpful for clarification, and comparison to al-Makhzūmī helps to illustrate the ways in which land taxonomy changed from the Fatimid/Ayyubid era into the Mamlūk period. Such a comparison also shows that in addition to differences in detail, classification of land quality and value had also undergone changes in this intervening period.⁷⁵

⁷¹ Frantz-Murphy, "Agrarian," 4; Abū al-Ḥasan ibn 'Ūthmān al-Makhzūmī, *Kitāb al-minhāj fī 'ilm kharāj miṣr*, Supplément aux Annales Islamologiques, Cahier N° 8, ed. by Claude Cahen, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1986).

⁷² Ibid., 80.

⁷³ Ibid., 5, 80-84; Rabie, "Technical," 65. For a translation and discussion of Ibn Mammātī's *Qawānīn al-dawāwīn*, see: Richard S. Cooper, "Ibn Mammātī's Rules for the Ministries: Translation with Commentary of the Qawānīn Al-Dawāwīn," PhD diss., (University of California, 1973).

⁷⁴ al-Qalqashandī, *Ṣubḥ*, 3:449-452; al-Maqrīzī, *Khīṭaṭ*, I: 100-101.

⁷⁵ See, Table 3: al-Makhzūmī's Land Classifications.

The classification system presented in al-Qalqashandī, which borrows heavily from Ibn Mammātī, details thirteen soil types.⁷⁶ These soil types each had particular requirements for irrigation and plowing and a corresponding tax rate. Additionally, each soil category had corresponding crops, which were specifically grown in the season in which the soil was appraised and in its previous growing season.⁷⁷

Type 1: al-bāq

As can be seen in “Table 2: Ibn Mammātī’s Classification of Soil Types as Relayed by Al-Qalqashandī”, the most important type of land was *al-bāq*. This soil type was the most valuable because it was capable of supporting two of the largest cash crops: wheat and flax.⁷⁸ As part of crop rotation, on the season in which wheat and flax were not grown, the land was sown with clover (*qurt*) and legumes (*qaṭṭānī*); also grown in the off-season were gourds (*maqātī*), which al-Qalqashandī notes rendered the land to be also classified as *barsh*.⁷⁹ Al-Makhzūmī states that *al-bāq* followed *barsh* in terms of quality and was best for wheat.⁸⁰ Furthermore, he tells that in the period preceding its planting of wheat, it was generally planted with legumes.⁸¹

Type 2: riyy al-sharāqī

It is not clear what sort of crops were specifically grown on *riyy al-sharāqī* land, although its produce was purported to be excellent. As such, it was taxed at the same rate as *al-bāq* land.⁸² The *riyy al-sharāqī* soil type was lightly irrigated in the preceding growing season, and heavily irrigated in the one in which it was assessed.⁸³

Type 3: al-barūbiyah

⁷⁶ al-Qalqashandī, *Ṣubḥ*, 3:449-452.

⁷⁷ Ibid. See: Table 2: Ibn Mammātī’s Classification of Soil Types as Presented by al-Qalqashandī.

⁷⁸ al-Qalqashandī, *Ṣubḥ*, 3:450; al-Maqrīzī, *Khīṭaṭ*, I: 100.

⁷⁹ Ibid.

⁸⁰ al-Makhzūmī, *Kitāb al-minhāj*, 1-2,4, 58-59; Frantz-Murphy, *Agrarian*, 80, 82.

⁸¹ Ibid.

⁸² al-Qalqashandī, *Ṣubḥ*, 3:450; al-Maqrīzī, *Khīṭaṭ*, I: 100.

⁸³ Ibid.

In the alternating season in which *al-baq* was grown with clover and legumes, it was called *al-barūbiyah*.⁸⁴ This planting allowed the land to be returned to *al-baq* in the following season. While growing clover and legumes, however, the land was taxed at a lower rate.⁸⁵ Al-Qalqashandī's description of this land type matches with al-Makhzūmī's report.⁸⁶

Type 4: al-buqmāhah

Generally sown with flax, *al-buqmāhah* may have been planted with wheat in its following season. Nutrient leaching, as a result of a wheat crop, resulted in a bad harvest of low quality produce in the season after wheat was grown.⁸⁷ It is not completely clear what produce other than flax was grown in alternating seasons. Because of an inability to support large wheat crops and because of nutrient leaching in non-wheat seasons, *al-buqmāhah* was taxed at a lower rate than *al-barūbiyah*.⁸⁸ Al-Maqrīzī refers to this type as *al-buqmāhiyah*.⁸⁹ According to *Kitāb al-minhāj*, the land is fallow in the season in which flax is not grown.⁹⁰

Type 5: al-shatūniyah

It is not clear what crops were grown in *al-shatūniyah* soil; this soil type being irrigated only in its non-growing season.⁹¹ Whatever the crop, *al-shatūniyah* was assessed at a level lower than *riyy al-sharāqī*.⁹² Al-Qalqashandī states that his contemporaries

⁸⁴ Ibid.

⁸⁵ Ibid.

⁸⁶ al-Makhzūmī, *Kitāb al-Minhāj*, 1-2, 58-59; Frantz-Murphy, *Agrarian*, 80, 82.

⁸⁷ al-Qalqashandī, *Ṣubḥ*, 3:451.

⁸⁸ Ibid.

⁸⁹ al-Maqrīzī, *Khiṭaṭ*, I: 100.

⁹⁰ al-Makhzūmī, *Kitāb al-Minhāj*, 1-3, 58-59; Frantz-Murphy, *Agrarian*, 80, 82.

⁹¹ al-Qalqashandī, *Ṣubḥ*, 3:451; al-Maqrīzī, *Khiṭaṭ*, I: 100.

⁹² Ibid.

called this type *al-shatānī*.⁹³ During al-Makhzūmī's time, this land type could be planted with any crop.⁹⁴

Type 6: shiqq shams

This soil type was irrigated and plowed in years that it was not cultivated and was allowed to fallow.⁹⁵ It produced very high-quality crops and therefore was taxed at the level of *al-bāq* and *riyy al-sharāqī*.⁹⁶ This type was called *al-salā'ih* in al-Maqrīzī.⁹⁷

Type 7: al-barsh al-naqā'

Al-barsh al-naqā', which al-Maqrīzī calls *al-naqā*, could support two crops a year because of its location and its ability to be watered by both active and passive methods of irrigation.⁹⁸ While taxed at the same level as *al-bāq*, because of its productivity, *al-barsh al-naqā'* could be watered twice whereas *al-bāq* was only watered once by Nile inundation.⁹⁹ A distinguishing feature of *al-barsh al-naqā'* was that its crops rotated between various types, although what these were is not specified. Further, each season required a crop not grown in the preceding one.¹⁰⁰ In al-Makhzūmī, *al-barsh* is the best and most valuable land type, and the highest quality flax (*kitān*) and wheat are grown on *al-barsh* land.

Type 8: al-wasakh al-muzdara'

The first of the poor quality soil types, *al-wasakh al-muzdara'* was filled with deleterious vegetation such as weeds and alfalfa plants.¹⁰¹ In most cases, these undesirable plants were unable to be removed; and as a result, any planting that was done

⁹³ Ibid.

⁹⁴ al-Makhzūmī, *Kitāb al-Minhāj*, 1-2, 58-60; Frantz-Murphy, *Agrarian*, 80, 82.

⁹⁵ al-Qalqashandī, *Ṣubḥ*, 3:451; al-Maqrīzī, *Khīṭaṭ*, I: 100.

⁹⁶ Ibid.

⁹⁷ al-Maqrīzī, *Khīṭaṭ*, I: 100.

⁹⁸ al-Maqrīzī, *Khīṭaṭ*, I: 100; al-Qalqashandī, *Ṣubḥ*, 3:451.

⁹⁹ al-Qalqashandī, *Ṣubḥ*, 3:451.

¹⁰⁰ Ibid.

¹⁰¹ Ibid.

resulted in a extremely poor harvest.¹⁰² This land type is called simply *al-wasakh* in al-Maqrīzī.¹⁰³

Type 9: al-wasakh al-ghālib

This land type was even of lower value than *al-wasakh al-muzdara* as all cultivation was impossible. The land was used for pasturing animals.¹⁰⁴

Type 10: al-khirs

This soil type, like the last, was used for pasturing livestock as it was rendered useless by weeds, reeds, and other undesirable vegetation.¹⁰⁵ The quality of the soil itself was worse than *al-wasakh al-ghālib*.¹⁰⁶

Type 11: al-sharāqī

The cultivation of produce on *al-sharāqī* land was rendered obsolete, not because of its soil type but because the land was either too distant from a water source or at too high an elevation for efficient irrigation. Watering being impossible, this land remained uncultivated.¹⁰⁷ Unlike Ibn Mammātī's description in al-Qalqashāndī, al-Makhzūmī says this land type was able to receive some irrigation by means of shadoofs.¹⁰⁸

Type 12: al-mustabḥar

The *al-mustabḥar* land type was flooded by the Nile's inundation; but unlike other soil types with passive irrigation, the waters failed to recede before planting.¹⁰⁹ As such, this soil was unusable but its waters may have been moved to irrigate other neighboring

¹⁰² Ibid.

¹⁰³ al-Maqrīzī, *Khīṭaṭ*, I: 100.

¹⁰⁴ al-Qalqashāndī, *Ṣubḥ*, 3:451.

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ Frantz-Murphy, *Agrarian*, 82.

¹⁰⁹ al-Qalqashāndī, *Ṣubḥ*, 3:451.

lands.¹¹⁰ In *Kitāb al-minhāj*, this land type is said to be suitable for planting barley if the excess water was drained away from it.¹¹¹

Type 13: al-sibākh

The least valuable and lowest quality of all of the soil types, *al-sibākh* was high in salt content and could not support high-value cereal produce.¹¹² Some parts of the land, if not overly saturated in salts, could be planted with asparagus and eggplant.¹¹³ Some of the soils were transported to plots with lower salt contents in order to support flax crops.¹¹⁴

LABOR, THE REGIME, AND THE PLAGUE

That these thirteen soil and land types were so understood and their corresponding crop rotations and irrigation requirements detailed, illustrates the degree to which agriculture was conducted systematically during the Mamlūk period. This sophisticated knowledge of soil types and Egypt's highly complex irrigation system supported an advanced agriculturally based society, which not only produced for domestic consumption but for exportation to other Mamlūk provinces and abroad.

Furthermore, as has been briefly discussed, it was on the basis of these soil and land types that taxes were assessed. With higher value crops grown on more fertile land and other crops grown on land of lesser value, the Mamlūk regime was necessarily cognizant of the land taxonomy utilized by Egypt's rural peasantry. Ensuring high productivity was not only important for plentifully supplying Cairo's food markets but also critical in maximizing the regime's tax revenues. Understanding the joint concern of both Egypt's peasantry and its ruling elite with perpetuating an efficient system of crop rotation and land usage helps to illustrate the connectedness of these two factions within

¹¹⁰ Ibid.

¹¹¹ Frantz-Murphy, *Agrarian*, 82.

¹¹² al-Qalqashandī, *Ṣubḥ*, 3:451; al-Maqrīzī, *Khiṭaṭ*, I: 101.

¹¹³ Ibid.

¹¹⁴ Ibid.

the food economy. It is telling that the major sources for the land typologies across the Fatimid, Ayyubid, and Mamlūk regimes were al-Makhzūmī, ibn Mammātī, and al-Qalqashandī, respectively, who were all writing with concern for administrative matters. The management of the land and its productivity, therefore, was inseparable from the business of administering the state. Viewing the land categories within this light further illustrates the issue of allowing land to fallow in order to preserve and increase its future productivity and, accordingly, revenue; looking at Tables 2 and 3, one should bear this issue in mind.

Maintaining this system of crop rotation, and the irrigation constructions discussed earlier, was a punctilious process requiring labor-intensive efforts. Mobilizing the peasantry to this end was one of the major responsibilities of the ruling Mamlūk class. Even in the case of passive irrigation, i.e. that reliant on the annual flooding, the peasantry took an active role in developing and maintaining the systems of dykes and canals necessary for the effective functioning of Egyptian agriculture. Far from being the passive recipients of the Nile's blessings, the Mamlūk ruling apparatus and the Egyptian population contributed actively to altering their landscape, improving irrigation, and ensuring successful agricultural production. John Cooper summarizes this point best:

The idea that Egypt's fertility... was the result of good fortune – whether divine or not – has not necessarily done justice to the many Egyptians whose ingenuity and labor converted the raw conditions in which they found themselves into the material and intangible culture of a relatively prosperous and complex society. In modern writings about ancient Egypt it is hard to escape the paraphrase of Herodotus that Egypt was “the gift of the Nile.” Yet such a characterization is reflective of both ancient and modern Orientalist perspectives of an inherently passive Egypt: it would surely be preferable to understand past Egyptian society not as a ‘gift’ – for which, implicitly, no exertion or payment is required – but

rather as an ongoing dialectic between Egypt's human inhabitants and the landscape in which they found themselves.¹¹⁵

As this chapter has shown, at every level of agricultural production, labor-intensive efforts on the part of the population were required. In the later Mamlūk period, changing demographics as a result of recurrent bouts of the plague certainly contributed to major changes in Egypt's agricultural output.¹¹⁶ "Many areas were left with insufficient labor to keep the local dikes in working order. When these dikes decayed, the Nile flood became harder to control, which in turn led to episodic parching or waterlogging of the village soil. These villages thus suffered from a substantial decline in the average yield per acre."¹¹⁷ Looking at the effects of this depopulation on actual agricultural output and the overall economy, Borsch compares the agrarian GDP in kilograms of gold in 1315 and again in 1517, and shows a 58% reduction in agrarian GDP, in comparison to England during the same period where agrarian GDP declined at 17%.¹¹⁸ He also does a similar analysis with *ardabbs* of crops and shows a correlative decline in yields.¹¹⁹ With the agricultural sector of the economy making up almost 75% of the total GDP, such reductions would be devastating.¹²⁰

Borsch's arguments are supported and confirmed by al-Qalqashandī who describes the gradual breakdown of the irrigation works, especially those to be maintained by the regime.¹²¹ Al-Qalqashandī also attributes the breakdown of these systems in part to the depopulation of the rural regions.¹²² In addition to depopulation as a

¹¹⁵ Cooper, *Medieval Nile*, 1.

¹¹⁶ For a discussion of the repeated calamities to effect Egypt, especially the plague, see: al-Suyūṭī, *Husn*, 2: 264-272.

¹¹⁷ Borsch, *The Black Death*, 40.

¹¹⁸ Borsch, *The Black Death*, 89.

¹¹⁹ *Ibid.*, 77.

¹²⁰ *Ibid.*, 75.

¹²¹ Borsch, *The Black Death*, 40; al-Qalqashandī, *Subḥ*, 3: 330.

¹²² Borsch, *The Black Death*, 41; al-Qalqashandī, *Subḥ*, 3: 330.

result of the plague, the rural peasantry also moved *en masse* to urban areas.¹²³ This further depopulation brought even more strain on the system and continued a vicious cycle that hindered recovery. So far-reaching was the depopulation that the regime had to resort to forced, *corvée* labor in attempting to maintain Egypt's network of irrigation.¹²⁴ The loss of revenue also had an effect on the regime's military expenditures, and this led to a decreased ability of the regime to fend off Bedouin incursions.¹²⁵ In addition, the decrease in arable land and the return of former agricultural land to mere pastures encouraged Bedouin activity in abandoned rural areas.¹²⁶ Beyond agriculture, industry in general entered a decline in the later Mamlūk period, and this was also almost certainly a consequence of population losses.¹²⁷ All of these events furthered the dramatic decrease in regime revenues discussed above and led to an overburdening of the Mamlūk system throughout the fifteenth century CE with far reaching consequences and ripple effects through the entire food economy.

Thus, considering the systems of irrigation and land use during the Mamlūk period and understanding the labor intensiveness of maintaining Egypt's agricultural structure provides context not only to how food was produced, but also to the changes that occurred in the food supply throughout the Mamlūk period and especially during its last century. These changes, especially those of a demographic nature, are not just helpful in understanding medieval Egypt's food economy but in understanding the larger

¹²³ Dols, *Black Death*, 163-165. William F. Tucker has two great discussions of the effects of the plague and other disasters on the peasantry of Mamlūk Egypt and Syria; see: "Natural Disasters and the Peasantry in Mamlūk Egypt," *Journal of the Economic and Social History of the Orient*, Vol. 24, No. 2 (May, 1981): 215-224; and, "Environmental Hazards, Natural Disasters, Economic Loss, and Mortality in Mamluk Syria," *MSR* III (1999): 109-128.

¹²⁴ al-Maqrīzī, *Khīṭaṭ*, I: 101, (cited in: Borsch, *The Black Death*, 42).

¹²⁵ Carl Petry, "The military institution and innovation in the late Mamlūk period," in *The Cambridge History of Egypt*, vol. 1, *Islamic Egypt, 640–1517*, ed. by Carl Petry (Cambridge and New York, 1998): 271; Jean-Claude Garcin, "The Regime of the Circassian Mamluks," in *The Cambridge History of Egypt*, vol. 1, *Islamic Egypt, 640–1517*, ed. by Carl Petry (Cambridge and New York, 1998): 314.

¹²⁶ Borsch, *The Black Death*, 51.

¹²⁷ Ashtor, *Social and Economic*, 306.

economy as a whole – whether in the case of price increases and inflation throughout the fifteenth century CE or the disappearance of various markets. Furthermore, in looking at the nature of Egypt’s agricultural production, the role of both Egypt’s rural populations and the ruling Mamlūk regime can be understood. Their joint efforts in maintaining the agricultural system, especially in terms of sustaining irrigation works and practicing land management, can be seen as producing the bounty described during the early period. Depopulation by the plague undermined this endeavor despite the efforts of the Mamlūk ruling elite to perpetuate it. The consequences of this massive population decline on the agrarian economy discussed here will be seen in other areas of the food network – from transportation to Cairo’s markets –in the coming chapters.

CHAPTER TWO: SURVEY OF THE FOOD COMMODITIES OF MAMLŪK EGYPT

Having reviewed the system of agriculture during the Mamlūk period, a discussion of the foods grown within Egypt and imported from abroad is required for a more comprehensive view of the Mamlūk food economy. Surveying the commodities of Egypt's food economy and seeing the diversity of its products and scope of its bounty is critical to understanding the immense undertaking of provisioning the city. In seeing how wide-ranging the foodstuffs on the market were, the actual complexities of the food economy become even more elucidated. Furthermore, such a discussion of the food commodities of Mamlūk Egypt aids in examining the role and importance of the various regions of Egypt within the overall system. Additionally it provides the background for discussing various issues related to the transportation network, the markets of Cairo itself, and other elements of the provisioning system.

In discussing the victuals within the scope of this thesis, it is important to understand the produce as commodities; an approach which differs from other methodologies, as will be discussed below. It is important to state at the outset that what follows is neither a comprehensive listing of all of the foods within Mamlūk Cairo's markets nor is it intended to be. Rather, this chapter seeks to construct a general portrait of the types of commodities available and create a sketch of the various foods grown, produced, and then supplied to Cairo's markets.

One of the factors inhibiting the creation of an exhaustive listing of the victuals sold in the medieval city is feasibility.¹ While al-Qalqashandī and al-Maqrīzī both have fairly extensive discussions of the produce of Egypt's lands in their works, neither

¹ Fernandes, "The City", 519. Fernandes raises two principle questions in her article: 1) were the markets of Cairo purveyed with local or imported foods from foreign lands?; and 2) what types of edible crops were imported and how did the supplies reach the market?

account should be taken as either definitive or scientifically exhaustive.² Meanwhile, the most thorough secondary source, discussing the various foods of the medieval city, may be found in Lewicka's recent work *Food and Foodways of Medieval Cairenes*, in which the author has detailed descriptions of the various items on the "Cairene Menu".³ Lewicka's approach, however, is to examine the foods of medieval Cairo as ingredients or consumables, whereas this study is interested in those foodstuffs as economic commodities or goods (i.e. items produced, brought to market, and sold). As such, Lewicka's invaluable and assiduous ingredients list can only aid this current study to a limited degree. Further, her approach to foods as ingredients consequentially also affects her use of sources and further narrows the applicability of her scholarship for this current study. Using this framework, some foods are present in her work because of their existence in recipes and cookbooks, their mentioning in literature or anecdotes, or in other ways that, while incredibly informative, do not suit the goals of this thesis. Therefore, as this present study seeks to understand the foods of Cairo in the context of economic activity, it necessarily limits itself to those foods that can be specifically placed within their commercial context. The food markets of Cairo themselves, however, will be discussed in chapter four.

Another challenge in conducting a survey of the food commodities of the period is in determining an organizational structure. Such a review could be organized categorically, as Lewicka has done, by food groups (fruits, vegetables, cereals, etc.), geographically by place of origin or destination, or in a myriad of other ways. This thesis follows a geographical approach by origin, when determinable, of the food commodity. The various locations, from which food was produced, which are to be discussed will be:

² al-Qalqashandī, *Ṣubḥ*, III: 307-310; al-Maqrīzī, *Khīṭaṭ*, 1:44; 1:100-103. Their lists, however, do provide a comprehensive detailing of the agricultural produce found in the Egyptian diet.

³ Lewicka, "Chapter Two: The Cairene Menu: Ingredients, Products and Preparation," *Food and Foodways*, 133-348.

Upper Egypt, Lower Egypt, regions outside of Egypt from which foods were imported, and Cairo and its environs. Additionally, even though some foods were produced in multiple locations, they are mentioned here on the basis of their eventual consumption in Cairo. For example, if wheat was grown in both Upper and Lower Egypt, but generally the wheat of the Ṣaʿīd was consumed in Cairo whereas that of the Delta was sold privately or exported to other regions and abroad, so this thesis discusses the wheat of Upper Egypt to the exclusion of that of Lower Egypt.

Organizing this chapter by the location of the various foods' origins is advantageous in moving forward to discussions of transportation (Chapter Three) and market locations (Chapter Four). Furthermore, in using a geographical rubric for studying the foods bound for markets in Cairo, a more coherent picture of the overall system of provisioning the population of the city may be gained. The danger, however, with such a categorization is in the potential for generalization about an entire system over the course of a long historical period. Thus, what follows should be taken as an outline or sketch of the food economy and not a fixed and immutable rule. Furthermore, as briefly mentioned above, this survey relies on primary source material when it is clear in attributing a good to a location; consequently, there are unavoidable omissions in what follows.

EGYPT'S PRODUCE BY REGIONS

Upper Egypt (al-Ṣaʿīd)

Throughout the medieval period, Upper Egypt was a center of production for the large cereal crops that formed the basis of the Egyptian food economy. Wheat (*qamḥ*), barley (*shaʿīr*), sorghum (*dhurah*), and millet (*dukhn*) were all grown in large quantities and shipped to Cairo from Ṣaʿīd for storage and sale in Cairo.⁴ While sorghum, millet, and barley are all controversial as to their uses and their provenance, wheat destined for

⁴ Boaz Shoshan, "Grain Riots," 469; Ira M. Lapidus, "Grain Economy," 3; Lev, "The Regime," 149-150, 152, 160; Fernandes, "The City," 522.

Cairo – that all important of Egyptian crops – was heavily grown in Upper Egypt during times of plenty; Manfalūt was especially famous for its high-quality.⁵ Wheat and other cereals were also grown in other parts of Egypt as well, especially the Delta. Furthermore, as in the Ayyubid period, taxes in Lower Egypt were generally paid in cash, whereas those of Upper Egypt were paid in kind.⁶ These in-kind tax payments of cereals and crops filled the warehouses of the Mamlūk regime and also served to supply the Cairene population.⁷ The crops of the Delta were allowed to be sold privately, in a process detailed below.⁸

Wheat production in Upper Egypt was almost certainly one of the most important of all economic and agricultural activities.⁹ Since antiquity, Egyptian wheat cultivation was essential to nearly every civilization of which Egypt had been a part. Within Egypt itself, wheat was the *sine qua non* of the Egyptian diet through the millennia because of the immense consumption of bread on the part of its population. The majority of Mamlūk Cairo’s wheat supply was grown on the sultan’s lands (*khāṣṣ al-sultān*) in Upper Egypt, especially around Manfalūt and on the *iqṭā’* land of the regime’s supporters.¹⁰ This was a legacy of previous regimes; the Fatimids and Ayyubids also had major caliphal and sultanic land holdings in Upper Egypt.¹¹ Control of Egypt’s wheat supply was a major part of the ruling elite’s charge. Storing wheat, controlling its distribution, and stockpiling reserves for crises were all part of the elite’s prerogative in order to ensure political and economic stability. This privilege did, however, also allow the elite to speculate on wheat prices and reap huge financial benefits. So important was the Upper Egyptian wheat

⁵ Lev, “The Regime,” 152; Fernandes, “The City,” 522; al-Ṣahīrī, *Zubdah* (II), 50.

⁶ Lapidus, “The Grain,” 3.

⁷ *Ibid.*

⁸ *Ibid.*, 3, 7, 10.

⁹ *Ibid.*, 2.

¹⁰ *Ibid.*, 3-5; Lev, “The Regime,” 153; al-Qalqashandī, *Ṣubḥ*, III: 3:522–23, IV:33, IV:61; al-Ṣahīrī, *Zubdah* (I), 35.

¹¹ Lev, “The Regime,” 153; Lapidus, “The Grain,” 3-6.

supply that part of the Fatimid navy was dedicated to guaranteeing its delivery to Cairo; its importance remained unabated in the Mamlūk period, and the delivery of wheat will be discussed in the coming chapter.¹² The lands directly controlled by the sultan (*khāṣṣ al-sulṭān*) and those held by *muqtā'* were not the only suppliers of wheat and grains. In addition, some properties were under the control of *waqfs* and private individuals on *mulk* lands.¹³ These properties also contributed to the Egypt's overall supply of wheat and grain, and their produce was taxed upon its arrival in Cairo before being sold in the city's open wheat and grain markets; these markets and the immensely organized mechanisms dedicated to the transportation, storage, and sale of cereals will be discussed in the following chapter.

Given the major importance of wheat as a commodity, Upper Egypt's role in the Mamlūk food economy was of central importance even had it not produced any other crop. However this was not the case, and millet and barley were also brought to Cairo from Upper Egypt and were important cereals in the Mamlūk food economy – although their actual uses as food is controversial within the sources.¹⁴ Millet seems to have been rarely used for human consumption and may have been a major source of fodder for animals.¹⁵ The chronicler Ibn Iyās states that millet was infrequently consumed but in *ghalā'* (a period of high prices) of 875/1470-71, people made breads from millet, sorghum, and beans (*fūl*).¹⁶ Barley, similarly, seems to have been mostly a fodder food – being distributed twice weekly to the Mamlūk corps – but rarely, if ever, used for human

¹² Lev, "The Regime," 152. Interestingly, this same unit was in charge of ensuring the delivery of firewood – wheat being needed for flour, and firewood for the firing of ovens for baking dough into bread.

¹³ For a full exposition of the dichotomy between regime and private wheat merchants in the Mamlūk period, see: Lapidus, "The Grain Economy of Mamluk Egypt," *Journal of the Economic and Social History of the Orient*, 12(1), (Jan., 1969); Jennifer M. Thayer, "Land Politics," 65-75, 80-84; al-Qalqashandī, *Ṣubḥ*, III: 449-450, 475.

¹⁴ Lewicka, *Food*, 136, 138.

¹⁵ Ibid., 137; Ibn Iyās, *Badā'i'*, III: 47.

¹⁶ Ibn Iyās, *Badā'i'*, III: 47.

consumption.¹⁷ Also grown extensively in Lower Egypt, barley flour may have been used in bread production for Cairo's urban poor.¹⁸ However, Goitein emphatically states that, on the basis of Geniza evidence, barley was non-existent in the Cairene diet.¹⁹

Sorghum, another predominately Upper Egyptian crop, is similarly problematic.²⁰ Ibn al-Athīr mentions sorghum as being grown in Upper Egypt, saying that it was a food eaten by the Nubians.²¹ Like millet, sorghum appears to be used mostly in times when wheat crops failed. Ibn Iyās and al-Maqrīzī both mention its use in bread making in times of famine along with millet and beans.²² Ibn Iyās even tells of a popular song during one particularly hard time: "My husband, he is a dupe / he feeds me sorghum bread."²³ In non-crisis periods, it is probable that sorghum was also used for fodder and in making bread for the urban poor, in a similar way as barley – thus explaining the large amounts of it grown and shipped for use even in times of plenty.

Another of the major products of Upper Egypt destined for the markets of Cairo and for exportation was sugar.²⁴ Having probably arrived sometime in the middle of the

¹⁷ David Ayalon, "The System of Payment in Mamluk Military Society (Concluded)," *Journal of the Economic and Social History of the Orient*, 1(3), (Oct., 1958): 261-262.

¹⁸ S.D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, Vol. I, *Economic Foundations*, (Berkeley, Los Angeles, London: UCP, 1967): 118.

¹⁹ Idem., *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza*, Vol. IV, *Daily Life*, (Berkeley, Los Angeles, London: UCP, 1983): 243.

²⁰ In modern Egyptian Arabic, *dhura* is generally translated as corn (maize) leading to numerous errors in scholarship from the ancient to medieval period. Corn, however, was a New World crop and was not introduced to the Old World until the Columbian Exchange – post 1492 CE. Corn is one of many crops that, although ubiquitous in modern Egypt, were non-existent in medieval times. Among these are: tomatoes, potatoes, sweet potatoes, pumpkins, peanuts, and others. For more on the Columbian Exchange and its consequences, see: Alfred W. Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492*, (Westport, CT: Greenwood, 2007).

²¹ 'Izz al-Dīn Abū al-Ḥasan 'Alī Ibn al-Athīr, *Al-Kāmil fī-l-tārīkh*, ed. by Yūsuf al-Daqqāq, 10 vols., (Beirut: Dār al-Kitāb al-'Ilmīyah, 1995): X: 45-46.

²² Ibn Iyās, *Badā'i'*, I/2:125, I/2:140, III: 47, III: 237-238; al-Maqrīzī, *Sulūk*, III/1: 235. al-Maqrīzī also mentions the use of beans (*ḥil*) in bread making in times of crisis.

²³ Ibn Iyās, *Badā'i'*, III: 237-238. Translated from: *zawjīr* [sic] *ḍī* [sic] *al-maskharah – yīṭ'umini* [sic] *khūbz al-durah* [sic].

²⁴ Sato Tsugitaka, "Sugar in the Economic Life of Mamluk Cairo," *MSR* 8(2), (2004): 96.

eighth century CE, sugar cane spread throughout Egypt during the following century.²⁵ During this period, it supplanted many local summer crops as shown in al-Nābulṣī's commentary on the rising prevalence of sugar cane in the Fayoum during the Ayyubid period.²⁶ From there, sugar cane became a major crop in both Upper and Lower Egypt; however, the Ṣaʿīd dominated the market.²⁷ Al-Qazwīnī (*d.* 682/1283) explicitly states that Assiut was a major sugar center whose products were exported worldwide.²⁸ Sugar cane was processed both in Upper Egypt and in Cairo; both contained large numbers of refineries.²⁹ In both cases, sugar, once processed, was consumed throughout Egypt and also exported abroad.

Rice was another of the important bulk crops that were grown in Upper Egypt and shipped to Cairo and elsewhere.³⁰ Among the places where rice production was prevalent was the Fayoum, although it was increasingly replaced with sugar cultivation.³¹ Additionally, Manfalūt was a major center for rice production, and its quality was renowned.³² Rice was also grown heavily in the area of Lake Manzalah in the Nile Delta, which was known to have one of the best qualities of rice, as will be discussed below.³³ Categorizing the market of rice consumers, like those of several previous crops, is also difficult. Both Levanoni and Ashtor suggest that rice consumption was beyond the means of the vast majority of Egyptians and was probably only eaten by the urban elite.³⁴ In any

²⁵ Ibid., 87.

²⁶ al-Nābulṣī, *Tārīkh al-Fayyūm*, 101-102, 122-123, 125-126, (as cited in Tsugitaka, "Sugar," 89).

²⁷ Tsugitaka, "Sugar," 90-91.

²⁸ Zakarīyā al-Qazwīnī, *Āthār al-bilād wa akhbār al-ʿibād*, (Beirut, Dār Ṣādir, 1969): 147; (cited in Tsugitaka, "Sugar," 96).

²⁹ Tsugitaka, "Sugar," 90.

³⁰ Fernandes, "The City," 522; 'Alī Ibn Riḍwān, *Medieval Islamic Medicine: Ibn Riḍwān's Treatise "On the Prevention of Bodily Ills in Egypt,"* trans. and ed. by Michael W. Dols, (Berkeley and Los Angeles: University of California Press, 1984): 84.

³¹ al-Nābulṣī, *Tārīkh*, 102.

³² al-Zahīrī, *Zubdah* (II), 50-55 (cited in Fernandes, "The City," 522).

³³ al-Zahīrī, *Zubdah* (I), 34. al-Zahīrī also states that the waters of Lake Manzalah were used for the cultivation of sugarcane and taro.

³⁴ Amalia Levanoni, "Food and Cooking," 209; Eliyahu Ashtor, "An Essay on the Diet of the

case, rice must have been consumed in significant amounts and its efficiency of production increased greatly throughout the period; for by the time of the Ottoman conquest and throughout the century that followed, numerous accounts attest to its widespread consumption.³⁵ What happened throughout the Mamlūk period transformed rice from being a food of the elite to that of the masses is still yet to be studied.

A final of the major staples of the Ṣaʿīd was livestock. Both cattle and sheep were prevalent in Upper Egypt and their exportation for consumption in Cairo is well attested by al-Maqrīzī.³⁶ Mutton was the king of the meats of Cairo, while beef and other meats were also consumed.³⁷ Sheep meat was, however, generally priced beyond the reach of the majority of the urban population, but its byproducts such as trotters and heads were widely enjoyed.³⁸ Furthermore, there seems to have been a sort of hierarchy among meat products in the Cairene markets, in the order of: mutton, beef, and goat.³⁹ Camel, buffalo and game meats were also consumed by the urban poor.⁴⁰ To illustrate this point, al-Baghdādī tells that Cairo's inhabitants would catch and eat mice from the desert and the fields around the Nile, calling them quails of the fields (*samān al-ghayṭ*).⁴¹ Many residents also practiced urban farming, to be discussed in detail later on, by which they kept poultry – chickens, geese, and pigeons – in their homes.⁴² Once raised and grazed in

Various Classes in the Medieval Levant,” *Biology of Man in History: Selections from the Annales. Économies, Sociétés Civilisations*, ed. by Robert Forster and Orest Ranum, (Baltimore: Johns Hopkins University Press, 1975): 126–127; Sami Zubaida, “Rice in the Culinary Cultures of the Middle East,” in *A Tale of Thyme: Culinary Cultures of the Middle East*, ed. by Sami Zubaida and Richard Tapper, (London, New York: Tauris Parke, 2000): 93.

³⁵ Lewicka, *Food*, 153.

³⁶ al-Maqrīzī, *Khīṭaṭ*, 1:189-190.

³⁷ Lewicka, *Food*, 175.

³⁸ Ibid.; Idem., “The Delectable War,” 27. See: Chapter Four for a discussion of the Market of the Sheep-heads.

³⁹ Ibid.; Joshua Finkel, “King Mutton,” 122-148 (I); 9 (1933-1934): 1-18 (II).

⁴⁰ Lewicka, *Food*, 175.

⁴¹ al-Baghdādī, *Riḥla*, 123.

⁴² al-Qalqashandī, *Ṣubḥ*, III: 314.

Upper Egypt, these livestock were then shipped to Cairo where they were slaughtered and sold.⁴³

The preceding discussion has illustrated that Upper Egypt, throughout the Mamlūk period, served as the supplier for the major bulk food commodities of Cairo. Grains, sugar, rice, and meat were all produced in large quantities in the Ṣaʿīd and shipped to Cairo for consumption. This fits with the general concept that taxes of Upper Egypt were paid in kind and that many of the major landholdings for the sultan and the Mamlūk military caste were in that region. Upper Egypt's supply of staple goods to the Cairene market represents a continuity with preceding periods; the Fatimid caliph and Ayyubid sultans also had massive landholdings in Ṣaʿīd for supplying the markets of Cairo.⁴⁴

Upper Egypt, however, did not produce only large food goods for transportation to Cairo. It also produced a variety of other crops – among them fruits and vegetables – that were also consumed directly in the Ṣaʿīd.⁴⁵ Throughout the Mamlūk period, peasant populations subsisted on the crops and produce of their local area. Whereas, it was generally the large urban markets that were the recipients of a diverse and complex food trade network.⁴⁶ Ibn Duqmāq tells that the Upper Egyptians consumed very sweet diets because of the prevalence of dates and sugar in the local region.⁴⁷ Concurring, al-Maqrīzī says that diets varied by region and that the Upper Egyptians were heavy eaters of sweets, with the dates and sugar not consumed being shipped to Fustāt.⁴⁸ Further, other crops grown and produced in the south were also sent to Cairo. Broad beans, dates,

⁴³ The transportation of livestock and the various meat markets of Cairo, will be discussed in chapters three and four, respectively.

⁴⁴ Lev, "The Regime," 152.

⁴⁵ Levanoni, "Food and Cooking," 213.

⁴⁶ Ibid.

⁴⁷ Ibn Duqmāq, *al-Intiṣār*, 41-46.

⁴⁸ al-Maqrīzī also describes the diets of the various regions of Egypt in this section, see: al-Maqrīzī, *Khīṭaṭ*, 1: 44. Fernandes, "The City," 520.

honey, and other products were all sent to Cairo from the Ṣaʿīd. That said, it was the staple crops discussed above that constituted Upper Egypt's integral role in the Mamlūk food economy, and which will form the focus of discussions of Upper Egypt's role within the overall food system moving forward.

Lower Egypt (the Delta)

Spreading fanlike from the main body of the Nile towards the Mediterranean Sea, the Egyptian Delta, the region also known as Lower Egypt, is a land of complex, intertwining canals connecting the Nile's final branches in their flow northward. In addition to being a center of agricultural and plant cultivation, the Delta also supplied much of the livestock necessary for the production of dairy products – in addition to their being butchered for meat. Its port cities along the Mediterranean coast were centers for shipping and fishing, with exports often arriving from abroad and fish caught for consumption.

Like Upper Egypt, many grains were also grown in the Delta.⁴⁹ In times of crisis, these may have been sent to Cairo to make up for fallen reserves and to stabilize prices.⁵⁰ In times of plenty, however, much of the grains of the Delta, having been taxed, were shipped to other Mamlūk provinces or further afield to European trade partners.⁵¹ Among these grains, rice was one of the most successful; Barnabal and Rosetta (Rashīd) - in addition to Lake Manzalah – were important centers of production.⁵² It was here that rice cultivation had become most widespread at the time of the Ottoman conquest.⁵³ Among the other major cereals grown in Lower Egypt, barley was also especially widespread –

⁴⁹ Lev, "The Regime," 152.

⁵⁰ Ibid., 151.

⁵¹ Lapidus, "The Grain Economy," 8-9.

⁵² Lewicka, *Food*, 141; al-Zahīrī, *Zubdah* (I), 35; al-Zahīrī, *Zubdah* (II), 51-53.

⁵³ Ibid.

the consumption of which probably also matched that of its Upper Egyptian counterpart.⁵⁴ As previously mentioned, the cereals of the Delta never equaled those of Upper Egypt in their importance in the Cairene market; their value being mostly in supplying other areas of the Mamlūk realm and in trade. It is not clear from the sources as to what fruits and vegetables were specifically grown in Lower Egypt to be shipped to Cairo for consumption. However, the Delta did grow a great variety of produce, and like Upper Egypt, the majority of this produce was probably consumed locally.

The first of the major goods produced for intended sale in Cairo were dairy products. Numerous varieties of bovines, including cows and water buffalo, produced the milk that was then used for the production of cheese.⁵⁵ Cheeses were made in a variety of ways and often categorized either by the type of animal from which its milk derived or from the town in which it was produced. It would seem unlikely that milk was shipped to Cairo from the Delta for direct consumption. The sources are silent on the importation of raw milk into the city, and the time necessary for transportation in Egypt's hot climate would have rendered unprocessed milk coming from even a minor distance inconsumable. Raw milk and its immediate byproducts, like clarified butter, were probably produced using milk from the immediate environs of Cairo; the produce and livestock of the lands around the city will be discussed in the next section – cows were among these.⁵⁶

The great center for the production of cheeses in the Delta was Damietta (*Damiyyāṭ*) in northeastern Gharbīyya.⁵⁷ The cheeses of the Delta, and those produced in Egypt more broadly, were generally soft and salted cheeses made of cow or buffalo

⁵⁴ Ibid., 138.

⁵⁵ al-Maqrīzī, *Sulūk*, III/1, 295. Here al-Maqrīzī informs his reader that in Muḥarram 829/1425–6, “the death toll of the river-buffalos increased, which was the reason why milk and cheeses became scarce.”

⁵⁶ Frescobaldi, *Visit*, 54; Fernandes, “The City,” 522.

⁵⁷ Lewicka, *Food*, 235; Goitein, *Economic Foundations*, 124.

milk.⁵⁸ Other Egyptian cheeses, of course, did exist, but the provenance of these is not as directly clear as those of the Delta.⁵⁹ Various cheeses were certainly consumed throughout Egypt using local milk varieties – as local populations ate the produce of their own localities. Some cheeses were even made directly in the Cairo area using the milk of local cows and buffaloes, as Goitein shows in reference to Jewish cow owners and milk producers in the Fustāṭ area.⁶⁰ However, both Lewicka and Goitein show that the soft, white cheese varieties of Lower Egypt were the most popular in Cairo, and these cheeses were the most greatly imported of the Egyptian produced cheeses.⁶¹

Before moving on, it should be noted that one other type of livestock was reputed to have been brought to Cairo from the Delta. The traveler Gucci remarks that in Rosetta there were great amounts of fowl: “Then of chicken and great partridges there is abundance and this island supplies Cairo with almost everything it wants in great abundance for its big population.”⁶² Along with large livestock, poultry and other fowl were certainly coming from the Delta.⁶³ Although for meat products, Upper Egypt was the supplier *par excellence*, and Cairo also had a great deal of its own poultry, as will be examined in the next section.

The other major produce of the Delta and its northern ports on the Mediterranean coastline was fish. Fish were caught along the coast as well as in the Nile tributaries of the Delta providing both river and sea species. The fish being caught and processed in the Delta and sent to Cairo were also exported to the Levant and Europe.⁶⁴ Whereas the fish caught and consumed locally throughout Egypt – along the Nile including in Cairo – were eaten fresh, the Lower Egyptian varieties were generally prepared in some way as to

⁵⁸ Lewicka, *Food*, 235.

⁵⁹ *Ibid.*, 230-232.

⁶⁰ Goitein, *Economic Foundations*, 124.

⁶¹ Lewicka, *Food*, 235; Goitein, *Economic Foundations*, 124.

⁶² Frescobaldi, *Visit*, 97.

⁶³ al-Zahīrī, *Zubdah* (II), 51-53.

⁶⁴ Lewicka, *Food*, 211; al-Zahīrī, *Zubdah* (I), 108.

preserve them for transportation and later consumption. Salting, pickling, frying, and smoking were the most common methods.⁶⁵ Some fish were, however, brought fresh from the coast; Khalīl al-Ḥahīrī says that Damietta was an especially important city for catching and exporting fish, both fresh and smoked.⁶⁶ Fresh sea fish varieties brought from the Mediterranean coast and transported to Cairo were generally sold “in the winter and early spring.”⁶⁷

The majority of fish, coming to Cairo from the Delta and exported abroad, were preserved, although some fish were also transported fresh, as discussed above. The two most famous types of pickled and salted fish, even until the present moment, were *mulūḥa* and *ḥisīkh*. Both of these types are very similar in their production, however *mulūḥa* is made of sardines from the Nile while *ḥisīkh* is general produced using *būrī* (striped mullet).⁶⁸ The latter type of fish was caught in the salty Delta lakes of the Mediterranean coast and brought to Cairo from Tinnīs and Damietta.⁶⁹ Along with these latter cities, Burullus, Nāstarū, and the area around Alexandria all produced large amounts of sea fish for preservation and consumption in Cairo.⁷⁰ Eels from Damietta were also a major export; they were salted and then shipped to Cairo and afar.⁷¹ The traveler Piloti tells that at the beginning of the fifteenth century CE, Damietta’s products were sold in Syria, Rhodes, and Candia as well as Cairo.⁷² The picture he presents is of an

⁶⁵ For a discussion on the ways that fish were handled and processed, see: Lewicka, *Food*, 209-225.

⁶⁶ al-Ḥahīrī, *Zubdah* (I), 35; al-Ḥahīrī, *Zubdah* (II), 54; Fernandes, “The City,” 522.

⁶⁷ Ibn Riḍwān, *Medieval*, 109.

⁶⁸ Lewicka, *Food*, 222.

⁶⁹ Ibid.; al-Baghdādī, *Riḥla*, 123.

⁷⁰ Lewicka, *Food*, 210; al-Maqrīzī, *Khīṭaṭ*, I: 108; Ibn Riḍwān, *Medieval*, 109.

⁷¹ Lewicka, *Food*, 210.

⁷² Emmanuel Piloti, *Traité d’Emmanuel Piloti sur le Passage en Terre Sainte* (1420), ed. by P.H. Dopp, (Paris: Louvain, 1958): 27.

international entrepôt for fish products with traders coming from all around the Mediterranean to purchase Lower Egypt's ichthyological goods.⁷³

Throughout Egypt, Nile fish were caught most frequently in the autumn.⁷⁴ This was the period when the waters of the flood began to recede from the fields and return to their banks. Simply setting nets as the water began to flow away could catch fish in great abundance.⁷⁵ Even more often and convenient, fish stranded in fields by the descending waters could be picked from puddles and irrigation ditches in the muddy land.⁷⁶ In Cairo, these fish were sold fresh at fish markets, especially in mud-brick huts along the banks of the Great Canal (*khalīj al-kabīr*), which ran along the western side of the city.⁷⁷ In the Delta and elsewhere, the autumnal Nile fish, that were not sold fresh, were laid on reed mats and salted immediately, placed in vessels, and then prepared for sale.⁷⁸

Imported Foods from Other Regions

While Upper and Lower Egypt were rich in foodstuffs and the environs around Cairo were also extremely productive (still to be discussed), some foods either could not or were not produced in Egypt. This was true for a variety of reasons including Egypt's climate and also the specialization of its food producers (i.e. some cheeses were specialties of other areas). Importation for these reasons was especially the case for fruits, nuts, and cheeses. While this thesis does not discuss spices, these too were imported from far abroad for use both in Egypt and for resale and exportation to European markets.⁷⁹

⁷³ Ibid.

⁷⁴ Lewicka, *Food*, 213; al-Maqrīzī, *Khiṭaṭ*, I: 107-108.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ al-Maqrīzī, *Khiṭaṭ*, I: 108.

⁷⁸ Ibid.

⁷⁹ The topic of spices has been left untouched because of the great deal of examination it has already undergone, see: Walter J. Fischel, "The Spice Trade in Mamluk Egypt," *Journal of the Economic and Social History of the Orient*, 1(1), (1957): 157-174; John Meloy, "Imperial Strategy and Political Exigency: The Red Sea Spice Trade and the Mamluk Sultanate in the Fifteenth Century," *Journal of the American Oriental Society*, 123(1), (Jan.-Mar., 2003): 1-19; Francisco Javier Apellániz Ruiz de Galarreta, *Pouvoir et Finance en Méditerranée Pré-Moderne*:

Food was also imported during crises in order to attempt to meet the needs of the Egyptian population or in other cases when the Egyptian food economy could not meet its population's needs.

These latter instances of importation in the case of famine or dearth generally involved large shipments of grain.⁸⁰ Grain could be imported from other Mamlūk provinces, several islands in the Mediterranean (notably Sicily and Crete), as well as from the Frankish or European kingdoms.⁸¹ In addition to guaranteeing that basic consumption needs were met, importing grain in times of crises was especially important to ensuring civil stability.⁸² Lapidus discusses the implications of grain and bread riots as being not only expressions of discontent with famine but with the larger system of administration:

... every bread shortage [was] a crisis of confidence... by pressing the sultan, in whose hands lay the power to curb abuses, to remove obnoxious officials, curb the speculations of emirs and reduce prices... every grain crisis thus became a political game raging around the sultan without formal organs for articulation of the political struggle...⁸³

Shoshan also discusses this issue and furthers Lapidus's point, stating that:

Grain riots ...[were]... not merely... expressions of disappointment with shortages and the rise of prices on the one hand, [but] with the occasional incompetence of Egyptian rulers in solving problems of grain supply on the other... These incidents of confrontation between Egyptians and their rulers also throw light on the complex relations between pre-modern Muslim governments and their subjects.⁸⁴

Le Deuxième Etat Mamelouk et le Commerce des Épices (1382-1517), Consejo Superior de Investigaciones Científicas, (Barcelona: Institución Milá y Fontanals, Departamento de Estudios Medievales, 2009).

⁸⁰ On the importation of grain, see: Ashtor, "Wheat," 283-285, 287; Lev, "The Regime," 151; Lapidus, "The Grain Economy," 8.

⁸¹ Ibid.

⁸² Shoshan, "Grain Riots," 461-478.

⁸³ Lapidus, *Muslim Cities*, 147.

⁸⁴ Shoshan, "Grain Riots," 462.

Understanding the importance of grain riots during the fourteenth and fifteenth centuries CE in this light, Shoshan argues that these events should be seen as points of conflict between the population and the ruling elite, ones which threatened the stability of the regime – as stated by Lapidus. Preventing such incidents and mitigating their effects, therefore, would have been of critical concern for the ruling elite. Because of this, the importation of grain and the maintenance of its supply became not only critical for the survival of the population but also for the regime itself. Understanding this issue of ensuring supply and extending the issue to other aspects of the food economy, helps to point to the importance of the transportation and supply system, as will be discussed in the coming chapter.

Grain was not the only item to be imported because the local supply could not meet Egyptian demands. While not as critical to maintaining order, mutton supplies were simply not sufficient during various times to meet local consumption. As such, Ibn Riḍwān (*ca.* 378-453/988-1061) states that rams and sheep were imported from Cyrenaica in order to satisfy the appetite of the Egyptian population.⁸⁵ While other foods may have also been imported in order to meet deficits in supplying the local population's needs, grain and mutton were the most important imported goods in periods of crises and dearth – both goods being especially imported from Barqa, Syria, and Cyprus.⁸⁶

Another category of foods that were imported were those that either did not grow well in Egypt or were the specialties of other regions. In this category were the immense amounts and varieties of foods imported from Syria and the Levant (Bilād al-Shām).

⁸⁵ Ibn Riḍwān, *Medieval*, 90. Cyrenaica was the name of the eastern region of Libya in antiquity and was also known as Barqa in the Islamic period. Lewicka points out that the importation of sheep from Barqa continued into the twentieth century. See: Lewicka, *Food*, 184.

⁸⁶ Fernandes, "The City," 522. Sugar was another item that was occasionally imported because the local supply was at times insufficient. Sugar was increasingly imported from Syria, Cyprus, and various European kingdoms during the fifteenth century CE. See, Eliyahu Ashtor, "Levantine sugar industry in the later middle ages: an example of technological decline," in *Technology, Industry and Trade: The Levant Versus Europe, 1250-1500*, (London: Variorum Reprints, 1992): 320.

Among the goods that were especially renowned for their Shāmī provenance were oils, cheeses, fruits, and nuts.⁸⁷ Egyptian olives were notoriously poor for oil production; those grown in Upper Egypt were generally only pickled.⁸⁸ In order to meet demand, olive oil was imported from throughout the Mediterranean – Tunisia, Sicily, Palestine, and Syria.⁸⁹ Certain varieties of cheeses were also imported from Europe, Syria, and other regions.⁹⁰ Among the European varieties, hard cheeses coming from Sicily and Crete were the most common.⁹¹ Lewicka remarks that it is not entirely clear as to the characteristics of the Syrian cheeses.⁹² They were, however, probably made from goat or sheep milk and were similar to the Levantine cheeses of today.⁹³

Fruits and nuts were also imported in large quantities. Among the fruits coming from the Levant were pomegranates, pears, apples, plums, and quinces.⁹⁴ Whether these fruits came dried, as jellies or juices, or fresh is the subject of some debate. While Lewicka argues that it was possible to ship the goods fresh with chests filled with ice, the cost would probably have been prohibitively high for all but the wealthiest consumers.⁹⁵ On the other hand, Goitein contends that imported fruits were sold dry.⁹⁶ This argument is supported by the fact that dried fruits (*nuqaliyyūn*) were known to be sold in multiple locations, as Goitein mentions.⁹⁷ Al-Maqrīzī tells his readers that once Shāmī goods arrived they were sent to either Wakālat Amīr Qawṣūn or to Wakālat Bāb al-Juwwanīyyah and from there distributed to the city.⁹⁸ If fresh, imported fruits were

⁸⁷ Fernandes, “The City,” 522.

⁸⁸ Ibid., 520; Lewicka, *Food*, 316-318.

⁸⁹ Goitein, *Daily Life*, 252-253; al-Maqrīzī, *Khīṭaṭ*, II: 94; idem., *Sulūk*, II/1: 226.

⁹⁰ Goitein, *Daily Life*, 252; idem., *Economic Foundations*, 46, 124.

⁹¹ Lewicka, *Food*, 233; Goitein, *Daily Life*, 251-252.

⁹² Lewicka, *Food*, 234.

⁹³ Ibid.

⁹⁴ al-Maqrīzī, *Khīṭaṭ*, II: 93; Lewicka, *Food*, 268; Fernandes, “The City,” 253.

⁹⁵ Lewicka, *Food*, 269.

⁹⁶ Goitein, *Daily Life*, 246.

⁹⁷ Ibid.

⁹⁸ al-Maqrīzī, *Khīṭaṭ*, I: 363, II: 93-94.

carried using ice, they would probably have been sent almost immediately to their destined customers and not left to languish in one of the city's *wakālas*. As for dried fruits, al-Maqrīzī states that they were sold in various markets, especially Sūq Bāb al-Zuhūmah in the city center.⁹⁹ Fresh, dry, or jammed the imported fruits of Syria and the Levant were heavily consumed in Cairo and supplemented the fresh fruits grown locally, as will be discussed below. Likewise, nuts were also imported from Syria and sold in Cairo's markets. Apart from a minimal amount of almonds, few nuts were grown in Egypt in the medieval period.¹⁰⁰ Instead, pistachios, carob, almonds, and other nuts were imported and sold throughout the city.¹⁰¹

On a final note, like mutton, sugar and honey were both imported into Egypt despite large domestic production. While sugar consumption had increasingly competed with that of honey, the latter remained in high demand throughout the medieval period.¹⁰² In order to meet the Egyptian population's appetite for both sweeteners, merchants routinely imported both from various regions around the Mediterranean basin, especially from Palestine, Tunisia, Barqa, and later on, from Europe.¹⁰³ This importation of honey and sugar especially accelerated following drops in domestic production during the later fourteenth and fifteenth centuries. This probably occurred in conjunction with the overall decreases in agricultural production as a result of depopulation, as argued above.¹⁰⁴

This preceding section shows that whether out of necessity, emergency, or indulgence, foods came to Egypt from lands around the Mediterranean Sea. Sometimes, trade was conducted between Mamlūk Egypt and its provinces in Syria. In other cases

⁹⁹ Ibid., II: 97.

¹⁰⁰ Lewicka, *Food*, 283.

¹⁰¹ al-Maqrīzī, *Khīṭaṭ*, II: 93; Fernandes, "The City," 253.

¹⁰² Lewicka, *Food*, 299.

¹⁰³ Ibid.; Goitein, *Economic Foundations*, 125-126.

¹⁰⁴ Ibid.; Eliyahu Ashtor, *Levantine Trade in the Later Middle Ages*, (Princeton, N.J.: Princeton University Press, 1983): 17, 23, 126, 146, 151, 237, 244, 268, 336, 352, 360, 494.

importation occurred between Egypt and various kingdoms in Europe. Regardless of the circumstances for importation or the product's origin, Egypt's food economy was clearly integrated and well-connected into the larger trade networks of the region.

Cairo and its environs

Until now, foods grown domestically in Egypt's upper and lower provinces and those imported from abroad have been discussed. In exploring the produce of Egypt's provinces, it was mentioned that often fresh fruits and vegetables were grown and consumed locally. This pattern of local consumption for perishable green groceries was also true for Cairo and its immediate environs. For all of the food shipped to Cairo for consumption, a great deal of production also occurred locally, especially with regards to fruits and vegetables but also with some other goods as well.

While a great deal of livestock, poultry, fish, and dairy products were shipped to Cairo from Upper and Lower Egypt, the city's production of these goods, in meeting local needs, also remained strong. Cattle and other livestock, in addition to being imported, were grazed on land around the city on both sides of the Nile and brought to weekly markets at the city's gates for sale.¹⁰⁵ Fresh fish caught in the Nile in the vicinity of Cairo were also sold in along the city's main canal in temporary markets – as mentioned above.¹⁰⁶ Al-Qalqashandī also states that urban farming occurred with geese, chicken, and other poultry, such as pigeons, being frequently kept on rooftops and on local farms, as is still true today.¹⁰⁷

Fruits and vegetables, beyond those imported from the provinces and abroad, were grown in the orchards and fields around the city. The Italian traveler Frescobaldi places Cairo in the heart of a green belt of farmland and orchards. About this, he says, "...the

¹⁰⁵ Frescobaldi, *Visit*, 54; Fernandes, "The City," 522.

¹⁰⁶ al-Maqrīzī, *Khiṭaṭ*, I: 108.

¹⁰⁷ al-Qalqashandī, *Ṣubḥ*, III: 314; Fernandes, "The City," 520.

greater part of Cairo is planted. The beginning of the desert is five miles from Cairo...”.¹⁰⁸ Frescobaldi clearly states that all around Cairo produce is grown: “especially to the south and west, they harvest chick-peas, beans, melons, cucumbers and kidney beans.”¹⁰⁹ He goes on to describe “Materia” (al-Maṭṭarīyyah), just outside the city to the north, where there were many gardens and orchards growing dates, lemons, oranges, and an unidentifiable fruit, which he calls musae or the apple of paradise.¹¹⁰ In addition to Frescobaldi’s remarks, Fernandes has shown in her study of waqf documents that many endowments included gardens and orchards. On this point:

Often... large fields and orchards located around the city were selected by the sultans to be part of their holdings... the produce of these orchards was under the direct control of the administrator of the *Waqf* [sic], i.e. the founder and later his descendants, and that it was destined for the markets of Cairo.¹¹¹

Examples of this abound. The fruits grown on lands in the suburbs of Cairo, Giza, and the island of Jazīrat al-Fīl were designated in the *waqfiyyah* of Sultan al-Mu’ayyad Shaykh to be delivered to the Dār al-Tuffāh, at the southern gate of the city, for sale.¹¹² The *waqfiyyah* of Sultan al-Ghawrī also mentions produce properties; his endowment had orchards near the Bāb al-Zuwāylah for dates and orchards around a nearby pond, Bīrkat al-Ratlī “... where all sorts of citrus fruit were grown in addition to dates, pomegranate, grapes, apricots, almonds, and bananas.”¹¹³ The crops of these lands were sold to the benefit of the *waqf*. With other landholdings the peasants would directly bring their produce into the city each morning, sell them, and then return to their homes and farms at night.¹¹⁴

¹⁰⁸ Frescobaldi, *Visit*, 53.

¹⁰⁹ *Ibid.*, 54.

¹¹⁰ *Ibid.*, 53.

¹¹¹ Fernandes, “The City,” 525.

¹¹² *Ibid.*

¹¹³ *Ibid.*

¹¹⁴ *Ibid.*, 521.

Having discussed the lands around Cairo, it is important to review the various fruits and vegetables grown in Egypt, which have not so far been discussed at length. Whether all of these fruits and vegetables were grown immediately in the vicinity of the city is not certain. However, as most of them would have been perishable in their fresh state, it must be assumed that the vast majority of them were grown locally. Other than al-Zahīrī's statement that pomegranates were produced in Manzalah and sent throughout Egypt, there are few other references to the production and shipping of fresh fruits.¹¹⁵ Although, as has been previously noted, it may have been possible to ship fresh fruits and vegetables by means of ice or other conveyance. In any case, even if not all fruits and vegetables were grown locally, and some were certainly imported from the provinces, it is advantageous to enumerate them here – if for no other reason than showing the immense variety of fresh goods produced throughout Egypt.

One final note must be made with regards to the growing of crops because of its important implications for the availability of food goods. Because of the climate and system of irrigation, crops in Egypt were grown in two seasons: winter and summer – with the corresponding nomenclature *shitwī* (wintery) and *ṣayfī* (summery).¹¹⁶ Summer crops were sowed in the Coptic month of Baramhāt (February-March) and were irrigated by means of active or artificial irrigation, as discussed in the last chapter.¹¹⁷ These crops would have been harvested in the early summer before the beginning of the Nile's inundation. Following the receding of the flood, the winter crops could be sowed and would then be harvested in the late autumn or early winter.¹¹⁸ Even if fruits and vegetables were grown only in these seasons, many of them could have been dried or

¹¹⁵ al-Zahīrī, *Zubdah* (I), 35.

¹¹⁶ Rabie, "Technical," 68. See, Table 1: Coptic Months and the Agricultural Year.

¹¹⁷ Ibid.

¹¹⁸ Ibid.

otherwise preserved in order to be eaten throughout the year; pickling and drying were the most common methods.

Egypt's winter crops included wheat, barley, onions, beans, bitter vetch (a variety of pea, *julbān*), garlic, flax, chickpeas, clover, lentils and lupin.¹¹⁹ Among the summer crops were cabbage, kidney beans (*lūbiyah*), cotton, lettuce, sugar cane, eggplants, colocasia or taro, radishes, turnips, sesame, and watermelons.¹²⁰ While he does not make clear whether a crop was *shitwī* or *ṣayfī*, al-Qalqashandī mentions a few additional crops, which are supported by descriptions by al-Maqrīzī, including: cauliflower, cucumbers, jews mallow (*mulūkhīyyah*), leeks, various citrus fruits, grapes, figs, dates, apricots, plums, apples, pears, berries, and bananas.¹²¹ Taken together with the many other foods discussed in this chapter, this survey of fruits and vegetables completes the picture of the wide variety of foods available to the Cairene consumer.

The immense variety of foods available in Cairo impressed and astounded visitors from near and afar. Cairo's wealth and splendidness was always a point of pride for chroniclers of the city. The immense array of fruits, vegetables, meats, dairy products, and grains available to the Cairene consumer was a testament to Mamlūk Egypt's complex and organized food system. This regimen functioned not just within the Egyptian province but also within the larger Mamlūk realm and in conjunction with various kingdoms around the Mediterranean Sea. Organizing this system and ensuring its efficient functioning required an elaborate transportation network. It is with regards to this issue that Chapter Three proceeds.

¹¹⁹ al-Maqrīzī, *Khiṭaṭ*, I: 101-102; Rabie, "Technical," 68.

¹²⁰ Ibid.

¹²¹ al-Qalqashandī, *Ṣubḥ*, III: 307-310.

CHAPTER THREE: TRANSPORTATION, DISTRIBUTION, AND STORAGE OF FOODSTUFFS

One of the principle advantages from organizing the various foodstuffs of Mamlūk Egypt on the basis of their origins, in the previous chapter, is that it aids in discussing the methods of distribution and transportation involved in bringing those goods to the market. In discussing these processes, it must be kept in mind that transportation was the critical link between the goods' producers, in the various regions previously described, and their marketplaces within the city. Ensuring the supply of Cairo, therefore, was not only a matter of producing foodstuffs but also of guaranteeing their arrival at the city. From boatmen to traders, many people were employed in the task of bringing Egypt's victuals to their final destination. In utilizing Egypt's waterways and its location on the Mediterranean Sea and in carrying goods by overland caravans, these individuals dealt not only with the responsibilities of conveyance but were also required to interact with both their environmental and geographic realities in the process. Additionally, the distribution networks and the overall supply system was yet another level of the food economy in which the Mamlūk regime was concerned. By taxing merchants at varying points, requiring that goods be processed through specific wharfs and warehouses, and ensuring the delivery of critical goods, especially wheat, the Mamlūk apparatus actively engaged in various activities that helped to shape the processes of transportation and supply. Looking at these various elements affecting distribution – as well as the different actors engaged in the process – adds to the overall portrait of the complexity of the food economy and the potentiality for disruptions, especially from the plague, banditry, and other menaces.

In general, goods of shared geographic starting points were transported to Cairo using similar means of conveyance, i.e. various goods from one locale largely reached the

city using the same transportation method. Of course, there are exceptions to this point, especially when crops or foodstuffs were harvested in different seasons or when traditional routes were inaccessible. Similarly, goods from other provinces – especially Syria and Bilād al-Shām – and those foods coming from abroad may have come to market via sea or land routes depending on expedience, the safety of the trade route, or other factors including the merchant’s own preference.¹ Another advantage to the geographic categorization of food origins is in the discussion of the locations to which goods were initially brought into the urban setting, i.e. initial points of contacts with Cairo – docks, warehouses, granaries, etc. In discussing docks, for example, it will be clear that grains and sugar coming from Upper Egypt, which arrived by boat, docked at a specific location in Miṣr-Fuṣṭāṭ. As a consequence, the majority of Cairo’s granaries and its sugar refineries were located in the area.² Similarly, whether Syrian goods arrived by land or sea was a determining factor from which *wakālah* those goods were sold.

Keeping in mind these geographic factors as transportation, storage, and distribution issues are discussed will be greatly advantageous in moving forward to discussions of the locations of Cairo’s markets, in the coming chapter. Furthermore, understanding issues of transportation and geography will be helpful in aiding later discussions regarding transformations in Mamlūk Cairo’s food economy throughout the period. Before moving onto such a discussion, however, a few caveats are necessary.

As in the previous chapter, the sources of the period are relatively limited when discussing issues of transportation. While there is mention of how some goods came to market, especially critical goods like grains, the sources are more opaque when dealing

¹ Goitein discusses the challenges to Jewish merchants, who were worried about travel on the Sabbath. As a result, they often preferred caravans to sea travel as one could stop during a journey. See, *Economic*: 280-281, 298, 311. Also, Goitein, *Jews and Arabs: their contact throughout the ages*, (Ann Arbor: University of Michigan Press, 1974): 301.

² Some of the grains were also stored in granaries, silos, and barns throughout Egypt and the Mamlūk realms, as will be described later in this chapter.

with some other foodstuffs. On occasion there are specific references to the transportation of a specific good, but not enough information to generalize with respect to other goods of the same region. In some cases, information about various modes of transportation has to be made by deduction. That said, there is much more certainty about the destination of the goods once they reached Cairo. Finally, as in the previous chapter and for the same reasons, discussion of the system of food transportation will occur geographically, i.e. each region will be discussed individually in terms of how its goods were brought to their destinations in Cairo.

TRANSPORTATION OF FOOD GOODS BY GEOGRAPHIC REGION

Upper Egypt (al-Ṣaʿīd) and River Transportation

Upper Egypt's major contribution to the food economy of the period was the staple cereal grains (wheat, sorghum, millet, and barley) and other important crops like beans, sugar, and rice. The sowing, growing, and harvest of all crops followed a regulated annual schedule that was directly tied to the flooding of the Nile. Because wheat and most major cereals were winter crops (*shitwī*) and used irrigation by "run-off or flow" (*bi-al-sayh*), seeds were sown during the month of Bābah (September 28th – October 27th).³ In preparation for the growing season, seeds had already been distributed to the peasants during Tūt – (August 29th – September 27th) – which was the technical start of the agricultural year.⁴ Following the fall of the Nile's waters in late autumn, the land was tilled and cared for during the month of Kīahk (November 27th – December 26th).⁵ Harvesting of wheat and other major bulk crops, as well as the threshing of cereals, occurred in the late spring just before Bu'ūna (May 26th – June 24th); it was during this

³ See Chapters 1 and 2 for a discussion of irrigation methods and the dichotomy of winter/summer crops, respectively. Note, not all summer crops used active irrigation. Charles Pellat, *Cinq calendriers Égyptiens*, Textes Arabes et Études Islamiques, Tome XXVI, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1986): 7, 15, 19, 65, 75, 79, 95, 99, 101, 105, 113, 123, 125, 127, 129; Lev, "The Regime," 149. Also, see Table 1: Coptic Months and the Agricultural Year.

⁴ Ibid.

⁵ Ibid.; Lev, "The Regime," 150.

month that the Nile began to rise again.⁶ The rise of the river's water level continued through Abīb (June 25th – July 24th) and Misrā (July 25th – August 28th), reaching its maximum in the middle of Tūt.⁷ The co-occurrence of the rise of the Nile and the harvest of the major Upper Egyptian crops was fortuitous; crops were ready for shipment at exactly the moment in which water levels were sufficient for transportation. Furthermore, as goods moved downstream to Cairo, the Nile's levels continued to rise. This made possible the eventual shipment of goods, especially wheat, other cereals, and sugar up the Alexandrian Canal – which was only navigable during flooding season – for shipment abroad via the Mediterranean Sea.

As was true throughout Egypt, some of the harvested crops remained *in situ* for local consumption.⁸ Furthermore, some amounts of various crops – particularly sugar – were processed in Upper Egypt.⁹ Assiut was an important major center for sugar refining during the period. That being said, the majority of sugarcane was transported north, with other major crops, to Cairo for processing.¹⁰ Because the majority of the Upper Egyptian cereals sent to Cairo were under the auspices of the regime itself (the sultan and leading amīrs, as described in Chapter Two, these grains arrived at the port of Miṣr-Fuṣṭāṭ before being shipped to sultanic warehouses, barns, and silos, as will be discussed below.¹¹ This is in contrast to other grain shipments, mostly from Lower Egypt, that went to the

⁶ Ibid.

⁷ Ibid.

⁸ For an exposition of the local market system for grains and other goods, see: Thayer, “Land Politics,” 190.

⁹ Tsugitaka, “Sugar,” 96.

¹⁰ Ibid., 99. As mentioned in the previous chapter, Manzalah and Damietta in the Delta were both major centers for growing sugarcane and for its exportation (al-Zahīrī, *Zubdah* (I), 34-35).

¹¹ In addition to the warehouses and silos in Miṣr-Fuṣṭāṭ, the sultan also had storage facilities in Syria, Gaza, Ṣafad, in the citadels of Damascus, Karak, and Shawbak, and along the Mediterranean in order to supply his armies. See: Thayer, “Land Politics, 150”; al-Qaqashandī, *Ṣubḥ*, III: 456, 479-480; al-Zahīrī, *Zubdah* (I), 206.

port of al-Māqs – at the very start of the Mamlūk period – and then later Būlāq.¹²

Goods were stored on a variety of watercraft for the journey; however it is not completely clear as to the actual specifications of these boats. Cooper has identified probable candidates for the types of vessels that were used for transportation during the medieval period.¹³ His suggestions for the drafts of the ships and their types are based on observations by Le Père in the *Description de l'Égypte*. While Le Père's data comes from several centuries after the end of the Mamlūk period, they are the closest suggestions for ships of the period as there is absolutely no archeological evidence for medieval Nile ships; these descriptions, however, do match those of travellers throughout the 16th-19th centuries CE.¹⁴ The size of the draft of the ships and their carrying tonnage determined the length of time for which the ships could be waterborne. This is to say: the larger the ship and the more weight it carried, the less of the year it was operational as the Nile's flooding determined river depth. Based on this information, Cooper presents the two main types of river transport ships as the *falūkah* (carrying 160 tons) and the *markab* (shipping 200 tons), both of which were serviceable for five months of the year: mid-July to mid-December.¹⁵ Among smaller ships, the *nisf-falūkah* (110 tons) of Upper Egypt and the *qanjah kabīr* of the Delta (60 tons) were able to navigate for a shortly longer period of seven months: from early July to early February. In the interest of discussing all watercraft together, two additional Lower Egyptian ships are worth mentioning here. The *kabīr qayyas*, like the *qanjah kabīr*, also carried 60 tons but had a shallower draft and could sail for an additional month.¹⁶ While the *nisf-qanjah* (30 tons) sailed along Delta

¹² This division of grains – those that went to Miṣr-Fuṣṭāṭ and those that arrived at Būlāq – will be discussed in detail later in this chapter.

¹³ Cooper, *Medieval Nile*, 111.

¹⁴ *Ibid.*, 110-113.

¹⁵ *Ibid.*, 111-112.

¹⁶ *Ibid.*, 112.

routes for almost ten months of the year.¹⁷ In Khalīl al-Zahīrī's *Zubdat Kashf al-Mamālik*, he describes a specific ship dedicated to the delivering the sultan's grains, which could hold 5,000 *ardabbs*.¹⁸ This would have been an immense ship, considerably larger than the others described in this chapter. That said, the shipping of the sultan's cereal supply was taken very seriously. Ibn Baṭṭūṭa wrote that the sultan had 36,000 boats in his fleet dedicated to the purpose of conveying grain.¹⁹ During the Ottoman period, the grain fleet numbered 6,000 and included many private ships.²⁰ Thayer states that during this later period, all licensed river ships were required to be available for the regime's use during harvest time, and this was also probably true during the Mamlūk period.²¹ Whether Ibn Baṭṭūṭa or al-Zahīrī's numbers are exaggerations or not, the shipment of grain was an incredibly serious and important activity.

In looking at these various ship types, their carrying capacity, and the seasonality of navigation along the Nile, it is important to understand the precariousness upon which the entire food economy rested. Low inundations made the entire transportation system much more difficult, and delays could result in shortages and price increases along the supply chain. Furthermore, the nexus between harvest season, Nile flooding, and shipping activities points towards the industriousness of the Egyptian population in vigorously utilizing the river rather than being passive recipients of its "gift".

Once ships left from Upper Egypt, the river's current was generally sufficient to propel the ships northward towards their destination. In addition to increasing the depth of the river for navigability, the Nile flood also increased the velocity at which the river

¹⁷ Ibid.

¹⁸ al-Zahīrī, *Zubda*, 123.

¹⁹ Thayer, "Land Politics," 144.

²⁰ Ibid.

²¹ Ibid.

flooded, which aided in journey times to Cairo.²² The two most obvious sources for journey times during the medieval period, Ibn Jubayr and Ibn Baṭṭūṭa, both sailed against the current using the northerly wind, although Ibn Baṭṭūṭa also had a return journey. Their journeys took them from Cairo to the Upper Egyptian trade hub of Qūṣ in nineteen (Ibn Jubayr) and fourteen to twenty-two (Ibn Baṭṭūṭa) days; Ibn Baṭṭūṭa returned to Cairo from Qūṣ in nine to seventeen days.²³ It should be remembered, however, that both travellers did stop off at various towns and villages along the way. Later travellers from the eighteenth and nineteenth centuries CE corroborate the medieval travellers' numbers. Based on Cooper's calculations, the average journey time - during that later period and using a variety of different river craft - was roughly fifteen days from Qūṣ to Cairo.²⁴ Assuming these numbers are correct, it should not be taken for granted that the journey from Upper Egypt to Cairo was simply floating along with the current. Grounding ships on sandbanks or shallow sections of the river was a constant threat.²⁵ Running aground was especially risky if boats left too soon in the season or sailed at night; both of these tactics were employed in trying to maximize profits by arriving before competitors in Cairo's ports.²⁶ The job of bringing goods to market was no easy task, even with river navigation; running aground, being caught in storms, or having merchandise stolen by bandits were all risks for the Nile's boatmen. Before moving on, it is worth quoting Edward Lane on the issue of river navigation. The river being so critical to the functioning of the entire food economy, his portrait of the difficulties of sailing on the Nile is an apt conclusion to this discussion of river transport:

The navigation of the Nile employs a great number of the natives of Egypt. The boatmen of the Nile are mostly strong, muscular men. They undergo severe labour

²² Cooper, *Medieval Nile*, 125.

²³ *Ibid.*, 156-158.

²⁴ *Ibid.*, 159.

²⁵ *Ibid.*, 113.

²⁶ *Ibid.*

[sic] in rowing, poling, and towing; but are very cheerful; and often the most so when they are most occupied; for then they frequently amuse themselves by singing. In consequence of the continual changes which take place in the bed of the Nile, the most experienced pilot is liable frequently to run his vessel aground: on such an occurrence, it is often necessary for the crew to descend into the water, to shove off the boat with their backs and shoulders... Sudden whirlwinds and squalls being very frequent on the Nile, a boatman is usually employed to hold the main-sheet in his hand, that he may be able to let it fly at a moment's notice: the traveller should be especially careful with respect to this precaution, however light the wind.²⁷

Having looked at Nile navigation in Upper Egypt, and briefly discussed Lower Egypt's river vessels, it is worth mentioning one more way in which Upper Egypt contributed to Egypt's overall economic network. In addition to the cereals and other main foodstuffs of Upper Egypt, the Ṣa'īd was also the lynchpin to the Red Sea trade network for the early Mamlūk period. Goods and people traveling from the Nile Valley to the Red Sea, or *vice versa*, generally passed through the city of Qūṣ. Located midway along the river in Upper Egypt, luxury goods and spices from eastern Africa and the Indian Ocean trading network arrived in the Red Sea ports of 'Aydhāb or Quṣayr.²⁸ From there, goods were carried overland to Qūṣ before being placed on ships bound for Fustāṭ.²⁹ Once they arrived in Fustāṭ, they were taken to the Funduq al-Karīm before being sold in the city or transported onward to Mediterranean ports bound for Europe.³⁰ In this way, Upper Egypt, on the basis of Qūṣ and its corresponding Red Sea ports, served as an important regional shipping hub between the Indian Ocean and Mediterranean Sea

²⁷ Edward William Lane, *An Account of the Manners and Customs of the Modern Egyptians*, the Definitive 1860 Edition, (Cairo: The American University in Cairo Press, 2003): 329-330.

²⁸ al-Qalqashandī, *Ṣubḥ*, III: 468-469.

²⁹ Ibid.

³⁰ Ibid.

trading circles.³¹ This system began to change towards the end of the Mamlūk period as the Buja tribe living in Egypt's eastern desert began to charge increasingly greater sums for protection of goods that traversed their territory.³² As a result, ships began to bypass the southern harbors in favor of the northern ports of Suez and al-Ṭūr, which – among other factors – helped to spell decline for Qūṣ and Upper Egypt but also gave rise to Cairo's river port Būlāq.³³ Understanding this shift in trade routes, the rise of Būlāq, and the continued use of the ports of Miṣr-Fuṣṭāṭ for the importation of Upper Egyptian grain is salient in discussing the transformations that occurred in the overall system of the Mamlūk food economy.³⁴

Lower Egypt (the Delta)

As discussed in the previous chapter, the majority of the foodstuffs coming from the Delta into Cairo were cheeses, fish, and some poultry. The grains of the Delta were also brought to Cairo, but generally for the purposes of weighing and taxation after which they could be sold by private “merchant importers, brokers, and wholesalers (*jallāb*, *samāsir*, and *tujjār*)”.³⁵ As previously mentioned, taxes in Lower Egypt were paid in cash, and therefore many grain growers in the Delta would have sold their grain to these private dealers, who would arrange their shipping to Cairo before ultimately selling the grains further along the supply chain.³⁶ Unlike the majority of cereals from sultanī lands in Upper Egypt, which were destined for Miṣr-Fuṣṭāṭ, the grains of the merchants of Lower

³¹ For the importance of Qūṣ in the medieval period, see: Jean-Claude Garcin, *Un Centre Musulman de la Haute-Égypte Médiévale: Qūṣ*, Textes Arabes et Etudes Islamiques, Tome VI, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1976).

³² *Ibid.*, 50-57; Nelly Hanna, *An Urban History of Būlāq in the Mamluk and Ottoman Periods*, Supplément aux Annales Islamologiques, Cahier N° 3, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1983): 16.

³³ *Ibid.*

³⁴ For a more complete understanding of the multiple effects leading to the decline of Qūṣ, as well as the changing nature of the city's corresponding Red Sea ports, especially 'Aydhāb; see: Garcin, *Un Centre Musulman*, 413-453.

³⁵ Lapidus, “The Grain,” 10.

³⁶ Fernandes, “The City,” 527.

Egypt were taken to Būlāq; the landing site of these grains – the *sāhil al-ghallah* – and the procedures related to their processing and taxing, is discussed below.³⁷ Because of the bulk nature of grain supplies, the majority of the grain shipments from the Delta arrived by boat - these river craft being previously described.

Along with the grains of Lower Egypt, rice was also brought to Cairo.³⁸ It is hard to determine exactly the nature of its transportation, as the prevalence of rice in the period is not entirely clear and the sources are rather scant in references to the crop. Goitein does point out the existence in Fustaṭ of a House/Hall of Rice (*Dār al-Aruzz*) in the Geniza documents and states that it was “in the neighborhood of buildings belonging to a Muslim judge, a Christian innkeeper, and two Jewish ladies near the great thoroughfare of the bazaar of the oil-makers.”³⁹ Beyond this, there is little material to draw on regarding rice’s transportation into Cairo during the Mamlūk period. Leo Africanus, writing at the start of the Ottoman period, provides the only relevant comments on the issue stating that the inhabitants of several cities in the Delta made great profits from rice by transporting it to Cairo.⁴⁰ The inhabitants of a city called Anthius, he says, “gain much by rice which they transport unto Cairo.”⁴¹ While writing about Gezirat Eddeheb (*Jazīrat al-Ḍahhab* or the Island of Gold), he states: “The soile [sic] of this Island being apt for sugar and rice, is manured by most of the inhabitants, but the residue are imploied [sic] about carrying of merchandize unto Cairo.”⁴² So while it is clear that the rice was being sent to Cairo, it is not at all evident as to its exact mode of transportation.

³⁷ Lapidus, “The Grain,” 10.

³⁸ al-Ḍahīrī, *Zubdah* (I), 25, 69.

³⁹ Goitein, *Economic Foundations*, 119. On the issue of the deficiency of primary sources regarding the commercial activities of rice, Goitein states: “So far, however, not a single *razzāz*, or rice merchant, has been found in the Geniza, while H.J. Cohen’s Ph.D. dissertation... [on the topic of rice]... enumerates twenty of them, mainly for Iraq.”

⁴⁰ Leo Africanus, *The History and Description of Africa and of the Notable Things Therein Contained*, Vol. 3, edited by Robert Brown, (London: Haklyut Society, 1896): 865-868.

⁴¹ *Ibid.*, 867.

⁴² *Ibid.*, 869.

Looking at the other major products of the Delta, including poultry, cheese, and fish, the issue of sources presents the same problem. It is known that one of the most popular cheeses of the Delta, *jibnah al-khaysī*, was shipped to Miṣr-Fuṣṭaṭ primarily by Christians, who were known as *khayyāsūn* as a consequence.⁴³ These soft white cheeses, as well as other cheeses produced throughout the Delta all arrived at either the Dār al-Jubn (Hall of Cheese) in Fuṣṭaṭ or the Wakālah al-Jubn in Cairo.⁴⁴ Here the local cheeses, as well as foreign imports, were traded and sold and then further distributed to the city's many markets.

Upon arriving in Cairo, fish were also transported to a designated location within the city and then taxed. In addition to the temporary mud brick shops along the main canal that sold local fish, discussed above, the *Dār al-Samak* in al-Qāhirah was the main organizing point for the fish merchants.⁴⁵ Here the fishmongers congregated and their goods assessed in order for taxes to be extracted for payment to the sultan. After taxes were paid, fish were then retailed to markets throughout the city.⁴⁶

Because the sources are inadequate in reference to the transportation methods of specific goods, it is worthwhile discussing the two main modes of transport available to Delta producers. The first main way in which goods were shipped was by boat. Because of the prevalence of canals and the network of waterways in Lower Egypt, this was certainly the preferred option for bulk crops – as discussed above – and was also used for other crops and travellers as well.⁴⁷ Larger ships could be used for these bulk crops, and they could fairly easily navigate the Nile's branches as well as larger canals when the river's waters were high during and following the flood. However, even then, many of the

⁴³ Lewicka, *Food*, 515.

⁴⁴ al-Maqrīzī, *Khīṭaṭ*, I: 104, II:124.

⁴⁵ *Ibid.*, I: 108.

⁴⁶ *Ibid.*

⁴⁷ Goitein, *Economic Foundations*, 275.

Delta's smaller canals were too shallow for such boats. These situations required ships with shallow drafts in order to prevent grounding. It should be remembered, however, that the entire water network of the Delta would have been fairly non-navigable for several months of the year on account of low water levels. Smaller ships may have been able to pass on the main branches of the river, which would have also been significantly shrunken, but almost all major and minor canals would have been completely unsuitable for transportation. Of these canals, the Alexandria Canal was the most consequential for the purposes of transport and navigation. On account of this fact, it serves as an instructive example of the various issues surrounding water levels and navigability.

The Alexandria Canal connected the main body of the Nile with the Mediterranean port-city of Alexandria starting in antiquity.⁴⁸ Without such a canal, the city was stranded west of the main waterway network that connected the rest of Egypt's Delta and Nile River Valley villages and cities. With the prominence of the city in the antiquity, various canals connecting the Nile with Alexandria are reported throughout that period.⁴⁹ The importance of the city became less significant during the Islamicate period, however Alexandria's continued position as a trading entrepôt on the Mediterranean required that a canal continue to provide access for easier transportation onto the river. Furthermore, the Alexandria Canal fed Lake Mareotis with fresh water; this inland lake served as Alexandria's most important fresh water source, and the city suffered greatly without the lake's continual resupply of water from the Nile.⁵⁰ Connecting the Nile River – from its Rosetta Branch – to the city at Lake Mareotis, the Alexandria Canal was the main highway for goods and people traveling back and forth between the Mediterranean

⁴⁸ Cooper, *Medieval Nile*, 48-57, 63-68.

⁴⁹ *Ibid.*

⁵⁰ *Ibid.*, 69-70.

Sea and the Nile River Valley.⁵¹ Like most of the waterways of Egypt, the canal's navigability and usage was seasonal and entirely dictated by the flooding of the Nile. The canal's earth dam on the Rosetta branch was removed following the opening of Cairo's main canal sometime in September. For the following weeks, the Alexandria Canal would flood and earthworks would be constructed to maximize its holding capacity.⁵² With the canal full of water, travel could begin along the waterway and continue even as the river began to recede until it was no longer navigable again by around December or January.⁵³ This seasonality meant that for the few months that it was open it was swarmed with merchants and travellers thronging the waterway. Geniza documents show how aware traders were of the time window for the canal's navigability. Udovitch quotes an Alexandrian trader writing to his cousin in Fustāt: "Could you please send some linseed oil to me with a suitable person. Otherwise, keep it until someone will be coming through the canal; for the time when it will be passable is not far off."⁵⁴ Other documents show the concern with utilizing the canal before it was impassible. Goitein shares that "in a letter from Alexandria, dated October 23 (1140 [CE]), a merchant warns his correspondent in Old Cairo that if he does not come quickly, the Khalīj, or canal would go out of use and his merchandise would get stuck in the Mediterranean port."⁵⁵ In the times when the canal was not navigable – as it was for seven to eight months of the year – heavy ships and bulk goods in Alexandria would have to take the sea route to Rosetta and then continue on the main branch from there.⁵⁶ Ships moving from the Mediterranean straight into the Nile's Rosetta branch, at the city of Rosetta, were a common occurrence

⁵¹ Ibid., 63-68.

⁵² Ibid.

⁵³ Ibid.

⁵⁴ Abraham L. Udovitch, "A Tale of Two Cities: Commercial Relations between Cairo and Alexandria during the Second Half of the Eleventh Century," in *The Medieval City*, ed. by H.A. Miskimim, D. Herlihy, and A.L. Udovitch, (New Haven: Yale University Press, 1977): 150.

⁵⁵ Goitein, *Economic Foundations*, 298.

⁵⁶ Ibid.

during the majority of the year when the canal was not navigable.⁵⁷ Likewise, ships coming from the Levant and eastern Mediterranean frequently entered the Nile's Damietta Branch at the city of Damietta.⁵⁸ That larger ships moved from sea to river or *vice versa* was a common phenomenon in the medieval period in both the Islamicate world and in Europe.⁵⁹ There was little distinction between river and sea crafts, and the transition between the two was scarcely marked; the Nile River is called "the sea" (*al-bahr*) in Arabic and Hebrew sources of the period, and the movement into the Mediterranean from the river is simply indicated by stating a ship "went out into the salty sea".⁶⁰

This discussion of the Alexandria Canal, and shipping in the Delta generally, points to the fact that water bound shipping was the preferred method of transportation. Even when the Alexandria Canal was closed, transportation by water transport continued almost unabated. During the later fourteenth and throughout the fifteenth centuries, however, challenges to the transportation system began to mount. The disintegration of the irrigation and canal system meant that the all-important Alexandria Canal silted up in 770/1369, which was met by an unsuccessful attempt at restoration in 826/1423.⁶¹ Likewise, the chronicles are filled with references to projects being carried out in the later Mamlūk period with the intent of restoring the canal system.⁶² However, these were met with varying degrees of success, and almost no new canals were dug during this later period.⁶³

The one note of importance here, and it is reemphasized accordingly, is the constant reminder that when the river was at its ebb, transportation became much more

⁵⁷ Ibid., 296.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Borsch, *The Black Death*, 44.

⁶² Cooper, *Medieval Nile*, 117-123.

⁶³ Ibid.

difficult and smaller ships were required. Furthermore, most major transports of large crafts and of bulk goods had to occur during the immediate post-inundation season. Beyond seasonality and the major problems of grounding and closed canals, there were yet other issues of worry; the foremost of which was the issue of banditry. The Geniza sources have numerous illustrations of travelers and merchants, moving by both river and land, facing banditry and thievery.⁶⁴ Additionally, the chroniclers tell about raids on caravans and rural villages, both farming communities and those along trade routes.⁶⁵ Traders travelling by caravans often bribed Bedouin tribes to pass unharassed or paid for armed escorts; sea transports were also frequently accompanied by guard ships. In both cases, threats abounded and risk was frequent. However, the promise and lure of profits, usually great, ensured that fears were overcome.

Imported Foods from Other Regions

Foods arriving at Cairo from abroad were mostly coming from various European kingdoms or Bilād al-Shām. Some foods were also imported from Barqa, especially meat, and other locations along the North African coast. These North African foodstuffs do not appear to have been imported in quantities comparable to those coming from Europe or Syria.

Because of the Mediterranean Sea, goods arriving from Europe were necessarily transported by boat. These goods would first be docked in Alexandria, Damietta, or Rosetta where customs were assessed and duties were paid.⁶⁶ Similarly, goods coming by sea to Cairo from Syria and Bilād al-Shām – having left the ports of Sidon or Beirut –

⁶⁴ Ibid., 279-280, 327-332.

⁶⁵ See, Carl F. Petry, "Disruptive 'Others' as Depicted in Chronicles of the Late Mamluk Period," *The Historiography of Islamic Egypt (c. 950-1800), the Medieval Mediterranean*, ed. by Hugh Kennedy, (Leiden: Brill, 2001): 167-194.

⁶⁶ al-Qalqashandī, *Ṣubḥ*, III: 470.

would stop in the port cities of Alexandria or Damietta to pay customs fees.⁶⁷ In both cases, taxes and fees were applied depending on the origin of the trader and/or his religious affiliation; foreign traders had a different tax rate than Arab traders, and *dhimmi* merchants paid a different fee than Muslim traders.⁶⁸ Once the taxes were paid, the goods would then continue either by land or by water to Cairo, as described above. Upon arrival at the docks of Būlāq or one of the customs houses, taxes would again be assessed and levied.⁶⁹ It is worth noting, once more, that when the river was navigable, ships would transition from sea to river almost seamlessly, the distinction between the two being negligible.⁷⁰

Camels in caravans carried goods coming by land to Cairo from Bilād al-Shām. These caravans were of varying sizes and often employed an armed escort. When the caravans arrived at the border crossing of the Syrian and Egyptian provinces, taxes were paid at the customs post of Qaṭyā.⁷¹ Al-Qalqashandī states that these duties were levied depending on the type of the good being transported.⁷² While Lapidus states that the taxes were roughly five to ten percent of the value of the goods.⁷³ These routes were so important to commerce that “throughout the late thirteenth and fourteenth centuries, the regime assisted this traffic by building and maintaining bridges and caravansaries as resting places for commercial caravans.”⁷⁴ In addition to paying taxes at the border crossing, customs were also extracted upon arrival in Cairo; this last transaction sometimes occurring within the confines of the *funduq* or *wakālah* to which the goods

⁶⁷ Ibid.

⁶⁸ al-Makhzūmī, *Kitāb al-minhāj*, 28-29.

⁶⁹ Ibid.

⁷⁰ Goitein, *Economic Foundations*, 296.

⁷¹ al-Qalqashandī, *Ṣubḥ*, III: 470.

⁷² Ibid.

⁷³ Lapidus, *Muslim Cities*, 18.

⁷⁴ Ibid.

were destined.⁷⁵

Cairo and its environs

As was discussed in the previous chapter, most of the fresh produce that was consumed in Mamlūk Cairo was grown in the areas immediately surrounding the city. On the Nile's many islands, in the area between Cairo and Miṣr-Fuṣṭāt, and in the surrounding suburbs, the city was encircled by a greenbelt of gardens and farms. On these orchards, small gardens, and lands belonging to *waqf*, fruits and vegetables were grown that supplemented the foodstuffs that were brought from farther afield. Every morning peasants from the surrounding countryside would bring their goods into the city and then leave again in the evening.⁷⁶ Some of these venders would set up temporary displays of produce in front of merchants' shops, which were selling the same product. This often led to confrontation and complaints to the market-inspector (*muḥtasib*).⁷⁷ In addition to selling their produce directly on the street, these individual merchants probably were the main suppliers of the small neighborhood markets from which a large part of the population received their daily food.⁷⁸

The larger warehouses – from which fruits and vegetables were distributed to other smaller markets – generally received their produce from *waqf* holdings around the city, as was briefly mentioned in the previous chapter. On this point, Fernandes states:

[W]e have evidence that the produce of these orchards was under the direct control of the administrator of the *waqf*, i.e. the founder and later his descendants, and that it was destined for the markets of Cairo. Indeed, the *waqfiyya* of Sultan Al-Muy'ayyad Shaykh refers to fruit grown on land in the suburbs of Cairo, Giza,

⁷⁵ Fernandes, "The City," 523.

⁷⁶ Ibid., 521.

⁷⁷ Ibid., 522.

⁷⁸ Ibid., 521.

the island of Jazirat al-Fil on the Nile, and indicates that the fruit from these orchards was destined to Dar al-Tuffah.⁷⁹

Whether supplied by individual peasants and peddlers or through the organized mechanism of *waqfs*, local produce was sold throughout the city. While there are not direct indications in the sources as to how the goods themselves were transported, it is probable that they were carried manually or using a pack animal, e.g. donkey or camel. In any case, the goods had to be transported rather quickly so as not to spoil before their sale.

Arriving in Cairo: Dockyards, Granaries, and Other Commercial Structures

Having looked at the ways in which various food commodities arrived at the city, it is important to briefly look at the facilities to which these goods were then immediately sent. Besides the city's many markets, Mamlūk Cairo had an extensive infrastructure dedicated to the processing, storage, and wholesale of various goods. Whether the city's river docks or the warehouses of foreign merchants, a network of distribution points organized the system of food supply and represented another layer in the complexity of the food economy.

As previously explained, the bulk cereal grains arriving at Cairo's ports were divided on the basis of point of origin, which corresponded to whether these grains were privately sold (mostly from the Delta) or part of the sultan's holdings (mostly from Upper Egypt). Grains from Upper Egypt, belonging to the sultan and the government *diwāns*, arrived at the ports of Miṣr-Fuṣṭāṭ. These grains were then sent to the central regime-controlled storehouses (barns and granaries).⁸⁰ These supplies fed the sultan and his retinue, as well as supplying the military and with a portion being sent for storage in

⁷⁹ Ibid., 524-525.

⁸⁰ al-Qalqashandī, *Ṣubḥ*, III: 456, 479-480, 522-523, IV: 33, 61; al-Maqrīzī, *Sulūk*, II: 394.

various locations in the provinces.⁸¹ Additionally, from these regime-held facilities as well those of various *waqfs*, bakeries produced bread and grain that was sold to the population.⁸²

The organization of private grain distribution, however, was different than the direct processing of sultanic cereals.⁸³ While private sellers sold grains all over Egypt, in theory all grain had to be sent to the port of Būlāq for weighing and taxation before merchants were allowed to sell their crops.⁸⁴ For example, a merchant from a village in the Delta would bring his stock of wheat to Būlāq. The wheat would be weighed and taxed, and then it could be taken away to be sold back in the village. This process emphasized the importance that the grain crop be centrally processed in order to be taxed before being sold. Al-Maqrīzī states that no one could sell even the smallest amount without it coming through Būlāq first.⁸⁵ When grain boats arrived at the port of Būlāq, they landed at the *sāhil al-qāhirah* (the Waterfront of Cairo) or the *sāhil al-ghallah* (the Waterfront of the Harvest).⁸⁶ There the *khaṣṣ al-kiyyālah* – an office that employed an overseer and thirty soldiers – was responsible for weighing and taxing the grains.⁸⁷ Those grains that were not taken to be sold elsewhere, then proceeded along the route between Būlāq and the walls of Cairo. There in a maydān, an open square, the grains were laid out to be taken for storage, milling, or by bakeries for making bread.⁸⁸

At the Wheat Square (*maydān al-qamḥ*), which was also known as the Harvest Square (*maydān al-ghallah*), wheat and other cereals were brought for sale from the port

⁸¹ Lapidus, “The Grain Economy,” 6.

⁸² Ibid.

⁸³ For a discussion on the division between private and regime grains and the mechanisms for sorting, weighing, and taxing them, see: Lapidus, “The Grain Economy,” 6-8. Also, Fernandes, “The City,” 525-526.

⁸⁴ al-Maqrīzī, *Khīṭaṭ*, I: 88-89; al-Maqrīzī, *Sulūk*, II:150.

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ Ibid., II: 124; al-Zahīrī, *Zubdah* (I), 25.

of al-Maqs and later the port in Būlāq.⁸⁹ Al-Maqrīzī tells that the bushels of various cereals were laid out in the open square as well as along the sides of the road leading towards the Gate of Barley (Bāb al-Sha‘īriyyah), so named because of its proximity to the grain markets.⁹⁰ Furthermore, this maydān was located next to Cairo’s main canal, *khalīj*, which allowed it to take advantage of shipping on the canal during the flood season.⁹¹ The area remained important as a cereal zone into the modern era, as evidenced by the presence of an Ottoman commercial structure for selling wheat (*wakālah al-qamḥ*) and reports from the *Description*.⁹²

Similarly to the sale of bulk cereals in maydāns, cattle and other livestock were sold in squares outside of the city.⁹³ Information from the *Description* points towards the existence of slaughterhouses and cattle markets in the area around the Wheat Square in the west of the city.⁹⁴ While this is not directly noted in the Mamlūk chronicles, livestock sales and slaughterhouses probably existed in the area during the period. This is confirmed by the fact that livestock were brought into Būlāq from Imbāba and Giza, with Giza serving as the eastern terminus for cattle coming from Barqa.⁹⁵ As to the location of other livestock markets, in the early Mamlūk period, sheep were kept in a market on the Darb al-Aḥmar to the southeast of the Bāb al-Zuwāylah after they were gathered for sale.⁹⁶ This market moved during the later period to the area between the Pond of the Elephant (*Birkat al-Fīl*) and the canal in order to be closer to the city’s tanneries.⁹⁷ Other than livestock related to military affairs (camels, horses, and donkeys) being sold under

⁸⁹ al-Maqrīzī, *Khiṭat*, II: 124.

⁹⁰ Ibid.

⁹¹ Ibid.

⁹² Doris Behrens-Abouseif, *Azbakiyya and Its Environs: From Azbak to Ismā‘īl, 1476-1879*, Supplément aux Annales Islamologiques, Cahier N° 6, (Cairo: Institut Français d’Archéologie Orientale du Caire, 1985): 5, 45-46.

⁹³ Fernandes, “The City,” 521.

⁹⁴ Behrens-Abouseif, *Azbakiyya*, 46.

⁹⁵ Hanna, *Urban History of Būlāq*, 25; Raymond, *Cairo*, 287.

⁹⁶ Raymond, *Cairo*, 263.

⁹⁷ Ibid., 151.

the Citadel, there are few other references to the city's livestock markets. However, being as both large and small markets throughout the city sold various meat products, livestock sales probably happened in other *maydāns* around Cairo's walls as well.

A final major industry that had an extensive commercial and industrial infrastructure was sugar. As previously mentioned, the majority of sugarcane arriving in Cairo came from Upper Egypt. Like other products from that region, the sugar landed at the docks of Miṣr-Fuṣṭāṭ. As a consequence, most of the sugar refineries (*maṭbakh al-sukkar*) were located in the area of Old Cairo; Ibn Duqmāq places their number at sixty-one.⁹⁸ By the end of the period, there were also refineries in Būlāq, reflecting the growing importance of that port.⁹⁹ Pressing of sugarcane probably also happened in these locations, but both Sato and Ashtor argue that the majority of pressing factories (*ma'aṣarat al-sukkar*) were located in the sugar-growing regions themselves.¹⁰⁰ That these factories were located in Old Cairo had an influence on the location of Cairo's Confectioners' Market, as discussed in the next chapter.

The division of arrival locations for goods apparent in the preceding discussion, those from Upper Egypt landing at Miṣr-Fuṣṭāṭ and those from Lower Egypt at Būlāq, is clear when discussing wheat and sugar but is not explicit in dealing with all commodities during the Mamlūk period. This pattern, however, was probably established during earlier periods because of the pontoon bridge that connected Rawḍah Island to Giza, which blocked thru-traffic along the river but could be opened with great effort and only infrequently.¹⁰¹ Because of this bridge, Delta goods arrived to the north of the bridge at

⁹⁸ Ibn Duqmāq, *al-Intiṣār*, 1:41–46.

⁹⁹ Hanna, *An Urban History of Būlāq*, 25.

¹⁰⁰ Tsugitaka, "Sugar," 90; Ashtor, "Levantine Sugar," 93.

¹⁰¹ Władysław B. Kubiak, *Al-Fustat: Its Foundation and Early Urban Developments*, (Cairo: The American University in Cairo, 1987): 118.

the port of Fustāṭ and Upper Egyptian goods to the south of it.¹⁰² Additionally goods of various types and provenances also had their own landing areas during the early period: “The repeated use of certain places for anchorage, at first spontaneous, turned fairly soon into a customary practice which gave rise to a more or less permanent division of the harbour [sic]; ships from some localities moored in one place, and not in any other, and certain commodities had to be unloaded in definite places.”¹⁰³ That this pattern continued into the Mamlūk period – for goods beyond wheat and sugar – is probable. Furthermore, the continuation of dividing goods based on their point of origin was even more logical when the ports of al-Maqs and Būlāq came into being, especially as the geographic realities of Cairo’s urban area expanded.

Wakālahs and Funduqs

When looking at the commercial infrastructure related to the arrival, storage, and distribution of goods, one last set of structures is important for discussion: *wakālahs* and *funduqs*. Before moving on to surveying these structures, however, it is necessary to set about briefly defining them and looking at the usage of their terminologies. Generally, the terms *khān*, *funduq*, and *wakālah* have “designated the caravanserai [type] building, available to traders, who came for housing, sheltering their imported goods and concluding their transactions.”¹⁰⁴ While these terms came to have a wide amount of interchangeability, the structures were once understood as unique entities. Understanding the development of the terms *wakālah* and *funduq* is therefore critical to comprehending their purpose and usage moving into the Mamlūk period by which time their distinct

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ André Raymond and Gaston Wiet, *Les Marchés du Caire: Traduction Annotée du Texte de Maqrizi*, Textes Arabes et Études Islamiques, Tome XIV, (Cairo: Institut Français d’Archéologie Orientale du Caire, 1979): 1 - “Ainsi trois termes ont servi à désigner le caravansérail, bâtiment à la disposition des négociants, qui venaient y loger, y abriter les marchandises importées et conclure leurs transactions”.

definitions had become blurred.¹⁰⁵

The *wakālah*, a frequently used term during the fourteenth century CE, had earlier precedents. Goitein explains that the *wakālah* had its origins in the *dār al-wakālah* or the agency house.¹⁰⁶ The *dār al-wakālah* developed out of a need for traders to have an empowered, local representative or agent of the merchants (*wakīl al-tujjār*) to conduct transactions in their absence.¹⁰⁷ In addition to conducting business, the *wakīl* also provided the facilities for the storage and marketing of goods within the confines of the *dār al-wakālah*.¹⁰⁸ For those merchants who arrived in person with their goods, the *dār al-wakālah* served as a place for personal lodging with rooms for rent. Additionally, the *dār al-wakālah* provided the services required for official transactions as the *wakīl* was empowered to witness negotiations, oversee contracts, and represent traders in court.¹⁰⁹ Finally, the *dār al-wakālah* – being a place where commerce was centralized – was used by the Mamlūk governing apparatus for the levying of customs and taxes and for the supervision of foreign merchants.¹¹⁰

Similar to the development of the *wakālah*, the *funduq* arose out of a need for traders, to have a space to lodge, store goods, and market.¹¹¹ The *funduq* initially was a space for foreign, non-Arab merchants, to sell goods within the *Dār al-Islām* (Abode of Islam) and to be represented as a community in the presence of the state.¹¹² Based on Byzantine precedents, the development of the *funduq* began in the tenth century CE with

¹⁰⁵ Raymond's invaluable discussion of the conventions of these various terms, across historical periods and in the context of their usage in Cairo, both serves to illuminate the issue and illustrate its complexity. See, Raymond, *Les Marchés*, 1-23.

¹⁰⁶ Goitein, *Economic Foundations*, 186-192.

¹⁰⁷ *Ibid.*, 186-187.

¹⁰⁸ *Ibid.*, 187-189.

¹⁰⁹ *Ibid.*

¹¹⁰ *Ibid.*, 189-190.

¹¹¹ For an excellent study of the importance of the *funduq* in the Mediterranean world from late antiquity through the later Medieval period, see: Olivia Remie Constable, *Housing the Stranger in the Mediterranean World: Lodging, Trade, and Travel in Late Antiquity and the Middle Ages*, (Cambridge: Cambridge University Press, 2004).

¹¹² Constable, *Housing*, 8.

a community of Amalfi merchants in Miṣr-Fuṣṭāṭ and grew to represent the many foreign merchant communities in Egypt including the Venetians, Florentines, Genoese, and others.¹¹³ Like the position of the agent (*wakīl*) in the *dār al-wakālah*, the *funduq* had a representative or consul to settle disputes among the merchants and to represent their interests before the ruling regime.¹¹⁴ Additionally, a *funduqānī* (alternatively spelled in Romanized form: *fonticarius* or *fundicarius*), was responsible for assisting in the activities of the *funduq*.¹¹⁵ These officials, in addition to representing the concerns of the merchants before the state, were also charged with liaising with the regime in the collection of taxes and customs duties.¹¹⁶

Looking at this background, it is easy to see the parallels between the functions of the *wakālah* and the *funduq* and to understand how over time the usage of the terminology comingled. That said, the use of term *wakālah* became more prevalent in generally discussing commercial structures in medieval Cairo by the time of al-Maqrīzī, while the *funduq* continued to maintain its original purpose of housing foreign merchants, especially within the port city of Alexandria.¹¹⁷ The term *khān* adds to the complicated picture. Originally a secure highway resting point, the *khān* emerges as a major commercial structure within the Mamlūk city functioning much like a *funduq* or *wakālah*.¹¹⁸ At one point, al-Maqrīzī states “the *khāns* are packed with new-comers and the *funduqs* are crowded with residents.”¹¹⁹ Such a statement, indicates that the *khān* probably continued to have a nature of transient passing-through, where as the *funduq*

¹¹³ Ibid., 113-114.

¹¹⁴ Ibid., 112, 120, 130, 133-147.

¹¹⁵ Ibid., 134-144; Goitein, *Economic Foundations*, 189.

¹¹⁶ Constable, *Housing*, 68, 70, 73.

¹¹⁷ Constable, *Housing*, 283.

¹¹⁸ Ibid., 252-254; 257-259.

¹¹⁹ al-Maqrīzī, *Khīṭaṭ*, I: 361. Translated from: “... *al-khānāt al-mashhūnah bi-l-wāridīn wa-l-fanādiq al-kāzah bi-l-sukān...*”.

maintained more formal lodgings.¹²⁰ Looking at the medieval Arabic dictionary *Lisān al-‘arab*, the same trouble in clearly distinguishing between structures exists: “*funduq* is in Persian *khān*... the *funduq*, in the language of the people of al-Shām, is *khān* from the *khānāt* to which people rest when on the roads and in the cities.”¹²¹ Ibn Manzūr’s definition, written in fourteenth century Cairo, shows that by his time *khān* and *funduq* were being used almost as synonyms. Understanding this, helps to explain the presence of *khān* in the confusion over the usage of the three terms: *wakālah*, *funduq*, and *khān* in both the epigraphic record and in the chronicles.

One example is particularly helpful in illuminating the issue: when the Amīr Qawṣūn built a commercial structure in 730/1330, he called it a *khān*. Yet, when writing the *Khīṭaṭ* a century later, al-Maqrīzī calls the same structure Wakālat Qawṣūn.¹²² Van Berchem discusses the development of these terms by looking at the epigraphic record of Cairo during the Mamlūk Period. In doing so, he argues that the use of the word *wakālah* was uncommon during the time in which Amīr Qawṣūn built his *khān*, whereas by al-Maqrīzī’s lifetime – a half a century later – *wakālah* was used with increasing frequency and interchangeability with other terms.¹²³ By the time of Qāyṭbāy (r. 872-901/ 1468-1496), the use of the term *wakālah* had become even more widely spread.¹²⁴ Furthermore, as with the usage of the word *khān*, *funduq* also seems to have declined in usage in favor of *wakālah*, as the *funduq* became increasingly reserved for foreign merchants in Alexandria, as mentioned above.¹²⁵

The preceding discussion, while perhaps not completely edifying in terms of

¹²⁰ Constable, *Housing*, 60. Constable suggests there was “a measure of perceived differentiation, perhaps akin to the modern American usage of the words ‘hotel’ and ‘motel’.”

¹²¹ Muhammad ibn Mukarram Ibn Manzūr, *Lisān al-‘arab*, (Beirut: Dār al-Ṣādir, 1968): X: 313.

¹²² Max van Berchem, *Matériaux pour un Corpus Inscriptionum Arabicarum*, Première Partie: Égypte, Fascicule premier: Le Caire, (Paris: Librairie de la société asiatique de l’École des langues orientales vivantes, 1894): 180.

¹²³ Ibid.

¹²⁴ Ibid.

¹²⁵ Ibid; Constable, *Housing*, 283.

giving clear and distinct definitions to the terms, helps to explain the history by which they arose and the way in which they became intermingled. Additionally, it aids in explaining the prevalence of the use of the term *wakālah* to the those of *khān* and *funduq* in the commercial structures of al-Maqrīzī's chronicle. Furthermore, it helps to give critical background to approaching a discussion of these structures and their importance within the system of supplying food to the Mamlūk city.

*Wakālat Amīr Qawṣūn*¹²⁶

This *wakālah* was the destination of various goods arriving from Syria (Bilād al-Shām) by means of the overland trade route (goods from the sea route from Syria went to Wakālat Bāb al-Juwwanīyyah; see below). The market was situated near the northern gate of Cairo between the al-Ḥākīm Mosque¹²⁷ and the Dār Sa'īd al-Su'adā.¹²⁸ It contained a number of foodstuffs from Syria: oil, sesame oil, soap, grape jelly, pistachios, walnuts, almonds, carob, fruit juice and other foods of the same kind. Goods were sold wholesale here upon their arrival and then distributed throughout the city.¹²⁹

The near constant threat of highway banditry, discussed above, became greater during the crises of the later Mamlūk sultanate. In one particularly instance, the inability of the Mamlūks to defend Syria from Timur's invasion in 1401 CE, during the tumultuous reign of Sultan Faraj, meant that the overland route from Bilad al-Sham was severely threatened and foodstuffs from Syria declined.¹³⁰ This had a profound impact on the Wakālat Amīr Qawṣūn, which received its goods by land trade as discussed above.¹³¹

¹²⁶ *Index of Mohammedan Monuments in Cairo*, no. 11; built in 742/1341.

¹²⁷ *Index of Mohammedan Monuments in Cairo*, no. 15; built in 380-403/990-1013.

¹²⁸ al-Maqrīzī, *Khiṭaṭ*, II: 90; al-Qalqashandī, *Ṣubḥ*, III: 353; al-Maqrīzī, *Sulūk* II: 543.

¹²⁹ al-Maqrīzī, *Khiṭaṭ*, II: 93.

¹³⁰ *Ibid.*, II: 90; Raymond, *Cairo*, 146.

¹³¹ al-Maqrīzī, *Khiṭaṭ*, II: 90.

With land routes threatened and production decreased in al-Shām, the *wakālah* suffered major losses from which it never recovered.¹³²

Dār al-Tuffāh (Hall of the Apples)

This *funduq* was located at the southern gate of the city, the Bāb al-Zuwāyilah¹³³.¹³⁴ Produce, fruits and vegetables, grown in the orchards immediately surrounding Cairo were brought here. Upon arrival, the produce was sold to the various markets of Cairo and Old Cairo. Al-Maqrīzī states that the *funduq* was originally in the *ḥārat al-Sūdān* (the Quarter of the Sudanese) but was turned into a garden during the reign of the Ayyūbid sultan Ṣalāḥ al-Dīn Yūsuf ibn Ayyūb. The structure existing in the time of al-Maqrīzī was built in 740/1340 by the Amīr Ṭuqūzdamur and was a *waqf* for the benefit of his *khānqāh* in the Qarāfah (Cairo’s great cemetery).¹³⁵

Al Maqrīzī tells the reader: “Upon seeing [the *funduq*], you will always remember it. The scent emerges as from Paradise because of its odor and the beauty of its appearance, and the elegance of its sellers while they are displaying [the produce] with mixed fruits and scented blossoms.”¹³⁶ Furthermore, we are told that the open spaces of the *funduq* were covered with awnings to protect the fruits from the sun.

This scene of prosperity seems to have lasted until 806/1403 when al-Maqrizi states conditions became bad. From that point until 16th Sha ‘ban, 821/ 18 September, 1418, the market never regained its former glory. On that date, however, its upper floors and outside shops were destroyed because the windows of the al-Mu’ayyad Shaykh

¹³² Ibid.

¹³³ *Index of Mohammedan Monuments in Cairo*, no. 199; built in 485/1092.

¹³⁴ al-Maqrīzī, *Khiṭaṭ*, I: 363, II: 93; Idem, *Sulūk* II: 543.

¹³⁵ al-Maqrīzī, *Khiṭaṭ*, II: 93-94.

¹³⁶ Ibid., II: 93

Mosque¹³⁷ faced onto the market. The *waqf* deed was transferred, and restorations were begun.¹³⁸

*Wakālat Bāb al-Juwwanīyyah (Wakālat Barqūq)*¹³⁹

Also serving merchants arriving from Syria, the Wakālat Bāb al-Juwwanīyyah was located near its counterpart Wakālat Qawṣūn.¹⁴⁰ Initially built as a *funduq* by the *ustādār* (majordomo) Jamāl al-Dīn Maḥmūd ibn ‘Alī in 793/1391, it was converted into a *wakālah* by the sultan al-Malik al-Zāhir Barqūq. Goods that were distributed from this *wakālah* arrived by the sea route from Syria in contrast to those coming by the land route, which terminated at the Wakālat Qawṣūn (as discussed above). Al-Maqrīzī specifically lists among the goods of the *wakālah*: oil, fruit juices, and syrups. The *waqf* for the *wakālah* benefitted the Madrasah-Khānqāh of Barqūq¹⁴¹ at Bayn al-Qaṣrayn.¹⁴²

Funduq Ṭurunṭāy

This *funduq* was reserved for the oil merchants coming from Bilād al-Shām.¹⁴³ Al-Maqrīzī praises its size by describing to his readers how big and many its marble columns were. The *funduq* was located outside the western walls of the city near the Bāb al-Baḥr. It was destroyed by rioting Christians of al-Maqs in a sectarian upheaval in 721/1321. The fire was so bad that even the structure’s stone supports were burned. After this fire, the structure was never rebuilt.¹⁴⁴

Looking at the transportation of goods into Cairo, their destinations within in the city, and some of the structures responsible for their storage and wholesale, some patterns

¹³⁷ *Index of Mohammedan Monuments in Cairo*, no. 190; built in 823/1420.

¹³⁸ al-Maqrīzī, *Khīṭaṭ*, II: 94

¹³⁹ *Index of Mohammedan Monuments in Cairo*, no. 399; under the name *Wakālat al-Firakh*; built in 8th Century (?)/14th Century (?).

¹⁴⁰ al-Maqrīzī, *Khīṭaṭ*, I: 363, II: 94.

¹⁴¹ *Index of Mohammedan Monuments in Cairo*, no. 187; built in 786-788/1384-86.

¹⁴² al-Maqrīzī, *Khīṭaṭ*, II: 94.

¹⁴³ *Ibid.*

¹⁴⁴ *Ibid.*

begin to emerge. The dichotomy of the ports of Old Cairo (Miṣr-Fuṣṭāṭ) and those of al-Maqs, and later Būlāq, set the parameters for one of the arrangements of Cairo's goods and food infrastructure. This division was initially a response to issues of proximity and geography, a result of merchants and traders actively developing patterns of shipping that suited the realities of the river and the situation around Miṣr-Fuṣṭāṭ and Cairo. The Mamlūk governing apparatus also helped to shape and promote this dichotomy. By bringing regime-controlled grains into the wharfs of Miṣr-Fuṣṭāṭ and requiring the centralization of all other grains at Būlāq, the regime contributed to the perpetuation of the two ports as being distinct in their individual roles within the larger supply arrangement. Furthermore, that each locale had its own position within the shipping network and that this scheme was promoted by certain regime requirements, as previously discussed, also helped to maintain the two-port dichotomy through the Mamlūk period and beyond.

Looking at this system, one must not see an unchanging network for food transportation and provisioning. Rather instead, the system was constantly responding to situational factors and changing realities, whether the requirements of the regime for taxation or the shifting of Cairo's second port to Būlāq. In addition, some factors of distribution played a role in shaping the pattern of Cairo's food market activities. The bringing of local goods into the city via its gates and the placement of bulk goods and livestock in the maydāns outside of the city's entrances both helped to organize the selling of these goods. Other issues of infrastructure also promoted a certain pattern for the distribution of food and eventually its sale, such as the continued shipment of sugar to refineries in Miṣr-Fuṣṭāṭ, which played a role in promoting a southern location for the Market of the Confectioners in Cairo – as will be discussed in the coming chapter.

Moving into and throughout the fifteenth century CE, trade routes – both by water and by land – became increasingly untenable and the delivery of goods suffered as a consequence. This breakdown, as discussed above, can be understood within the context of the overall disintegration of the irrigation and canal network and the increasing inability of the Mamlūk regime to mount sufficient and prolonged defenses of the sultanate’s borders and trade routes. That said, the food transportation system did continue. Its resiliency serving as a tribute to the importance of the commodities it carried and to the population and ruling system that was engaged in its perpetuation.

CHAPTER FOUR: SURVEY OF THE FOOD MARKETS OF LATE MAMLŪK CAIRO

In an early section of the *Khiṭaṭ*, al-Maqrīzī discusses the qualities of the Egyptian people (*ahl Miṣr*). In describing one of these qualities, he states “one never finds them storing provisions at home, as is the custom of the inhabitants of other countries. Instead, they get their sustenance every day from the markets, morning and night.”¹ Al-Maqrīzī attributes this lack of planning to the disregard of Cairenes for the consequences of their behavior. He quotes Ibn Khaldūn in saying, “Egyptians live as if they are void from consequences.”² Far from being a result of recklessness, the real reason for their daily trips to the markets was a consequence of necessity: most homes throughout the medieval period lacked kitchens or other cooking spaces.³ Al-Maqrīzī was not alone in his assessment that Cairenes did not cook at home; several foreign visitors also reached the same conclusion. The Italian traveler Frescobaldi notes, “no citizen, however rich, cooks at home.” While his travel companion, Sigoli, similarly remarks, “ordinarily the Saracens do not cook at home.”⁴ The issue of kitchens in residential structures may appear disconnected from a discussion of marketplaces. However, the vibrancy and variety of the city’s markets and food stalls may be greatly attributed to the fact that the majority of Cairenes were eating outside of their places of residence. As such, a discussion of the issue of kitchen spaces is directly relevant to gaining a fuller picture of Cairo’s market life.

Among the various types of residential structures in the city, generally only wealthy, single-family homes contained the oven and space required for home

¹ al-Maqrīzī, *Khiṭaṭ*, 1:50.

² Ibid.

³ Lewicka, *Food and Foodways*, 90-100; Levanoni, “Food and Cooking,” 204-205, 208, 211.

⁴ Frescobaldi, *Visit*, 49; Sigoli, *Visit*, 167.

preparation of meals.⁵ There were, however, other types of structures that did contain communal kitchens. These included the city's numerous hospitals and Sufi convents (*khawāniq* s. *khānqāh*).⁶ Fernandes writes, "since Sufis were required to reside in the *khanqah* and since they were offered daily meals there... it had a kitchen and a place to gather for meals."⁷ For example, in the *Khānqāh* of Baybars al-Jashānkīr,⁸ the Sufis were provided with a full meal that included "meat, three loaves of bread, and sweets that were distributed daily to the Sufis," along with other foods such as vegetables and rice.⁹ Also larger apartment-style buildings (*rab' p. ribā'*) had kitchens in which to cook food for those residents living in a rented apartment or housing unit (*tabaqah*).¹⁰ Cooking in the *rab'* was done on the roof terrace space allotted to each *tabaqah*.¹¹

As to why most of Cairo's inhabitants ate food prepared outside the home, al-Maqrīzī describes a fire that engulfed the *Khatt al-Bunduqiyyīn* – the quarter in which crossbows were made – in the year 751/1350.¹² After this fire he says that many Cairenes gave up cooking at home for fear of causing an accidental fire; he also says that residents stored water at home in case of such an incident.¹³ In such a crowded city, fires were certainly a major cause for fear, but this was probably not the only reason for the absence

⁵ Lewicka, *Food and Foodways*, 381; Hanna, *Habiter au Caire*, 142; Levanoni, "Food and Cooking," 204-205, 208, 211.

⁶ Leonor Fernandes, "The Foundation of Baybars al-Jashankir: Its Waqf, History, and Architecture," *Maqarnas* 4 (1987): 21-42; Idem, "Three Šūfī Foundations in a 15th Century Waqfiyya," *Annales Islamologiques* 17 (1981): 141-156. In her discussion of the Sufi foundations in these two articles and in the translations of their *waqfiyyah*, Fernandes shows how food and cooking was provided for the beneficiaries. In the *waqfiyyah* for the foundation of Baybars al-Jāshankīr, not only was a cook provided for the kitchen, but there was also a bread attendant and two broth attendants ("Foundation," 26).

⁷ Fernandes, "The Foundation," 30.

⁸ *Index of Mohammedan Monuments in Cairo*, no. 32; built in 706-709/1306-10.

⁹ Fernandes, "The Foundation," 23.

¹⁰ Hazem I. Sayed, "The Rab' in Cairo: A Window on Mamluk Architecture and Urbanism," PhD diss., (Massachusetts Institute of Technology, 1987), 69, 94, 141-142, 208. See this dissertation for a full discussion of the *rab'* as a social, economic, and architectural unit of the city. Furthermore, this study directly contradicts Paulina Lewicka's statement: "in fact no study of the *rab'* structures confirms the existence of any kitchen space there" (*Food and Foodways*, 92).

¹¹ Sayed, "The Rab'," 60.

¹² al-Maqrīzī, *Khīṭat*, 2:32.

¹³ *Ibid.*

of kitchens in the city's homes. Several scholars have remarked on both the space that an oven would require and also the fuel needed for cooking food; wood, naturally, was scarce in Egypt's desert climate and even twigs were expensive.¹⁴ The use of other fuel sources such as dried animal dung caused heavy, thick smoke that would have caused great discomfort in closed spaces.¹⁵ Furthermore, contrary to what al-Maqrīzī suggests that people stopped cooking at home after the Khaṭṭ al-Bunduqīyyīn fire, food preparation outside of the home was not unique to the Mamlūk period and appears to be the case even in the earliest Arab settlement in Egypt as testified by the lack of hearths in the dwellings of Fustāṭ.¹⁶ The situation before the Arab conquests is murky. Archeological evidence from late Byzantine Egypt is scant, but what does exist seems to point towards limited cooking in the courtyards of large homes and street cooking for those of limited means.¹⁷

Even without kitchens and home cooking, the vast majority of Egyptians living throughout the medieval period had several options for obtaining food. For those with some means, raw ingredients were gathered in a local market, prepared at home, taken for cooking in one of the city's many ovens (*afrān* s. *furn*), and then returned home for consumption.¹⁸ Most people, however, appear to have purchased their meals prepared by cooks in the markets themselves and sold in the city's countless food stalls.¹⁹ Others bought food from one of Cairo's many roving street vendors, who seem to have sold a great variety of foods and even carried burning grills and boiling cauldrons of meat on

¹⁴ Lewicka, *Food and Foodways*, 96-99.

¹⁵ *Ibid.*, 99.

¹⁶ Personal communications with Professor George T. Scanlon.

¹⁷ Richard Alston, *The City in Roman and Byzantine Egypt*, (New York: Routledge Press, 2002): 1, 53, 118. The majority of archeological evidence from the Byzantine period is from the Karanis site in the Fayoum.

¹⁸ Lewicka, *Food and Foodways*, 115; Hanna, *Habiter au Caire*, 155. These ovens served multiple purposes, the cooking of food being only one of them. Their primary function was the baking of the population's main staple: bread.

¹⁹ Lewicka, *Food and Foodways*, 88-90, 100-103.

their heads!²⁰ Lastly, the city's poorest received their daily meals either through a charitable foundation or by another person's goodwill.²¹

From the local *sūqs* supplying ingredients for home preparation to the food stalls with ready-cooked meals, the food markets of Cairo were certainly busy in supplying every aspect of the city's daily dietary consumption. Before moving on to a survey of the major food markets of Cairo, it is important to discuss the various types of markets and their functions.

TYPES AND FUNCTIONS OF THE VARIOUS MARKETS

In writing about the vastness of Cairo during his lifetime and its countless and varied types of buildings, al-Maqrīzī writes:

Old Cairo (*miṣr*) and Cairo (*al-qāhirah*) have congregational mosques, ordinary mosques, inns, colleges, chapels, magnificent buildings, dignified homes, resplendent belvederes, immense palaces, flourishing gardens, luxurious baths, covered markets filled with all kinds of goods, *sūqs* filled with everything the soul covets, *khāns* crowded with passing travelers, *funduqs* packed with residents, mausoleums reminiscent of palaces, and [that which] cannot be listed or counted.²²

To this remark and the immense task al-Maqrīzī set before himself, Andre Raymond remarks: “*Toutefois, ce texte constitue un morceau de bravoure, sans plus.*”²³ Truly, dealing with the multitudes of markets throughout the city does require courage; it is not, however, an impossible task.

²⁰ Lewicka, *Food and Foodways*, 103.

²¹ *Ibid.*, 73, 131. For more information about issues related to charity and feeding the poor in Medieval Cairo, see: Mark Cohen, “Feeding the Poor and Clothing the Naked: The Cairo Geniza,” *The Journal Interdisciplinary History* 35 (5), (Winter 2005): 407-421; and, Adam Sabra, *Poverty and Charity in Medieval Islam, Mamluk Egypt: 1250-1517*, (Cambridge and New York: Cambridge University Press, 2000).

²² al-Maqrīzī, *Khīṭaṭ*, 1:361.

²³ Raymond, *Les Marchés*, 2. Translation: “However, this text (the *Khīṭaṭ* of al-Maqrīzī) constitutes a bit of bravery, nothing more.”

The two major terms that al-Maqrīzī employs with regards to the city's markets are *sūq* and *suwayqah*.²⁴ Generally speaking, the *sūqs* were “open structures, located along roads or at road intersections, the conglomeration of shops generally having no architectural distinction.”²⁵ The shops (*dukkān* or *ḥānūt*) were generally poorly fabricated constructions of such meager costs that they were built liberally and often constituted pious endowments (*waqfs*).²⁶ On the other hand, Raymond states that some markets could be quite permanent constructions being “...une série de boutiques dans une rue recouverte d'un toit en bois ou en pierres, et fermée par des portes aux deux extrémités.”²⁷ Whether ramshackle or permanent, each *sūq* was normally categorized by the professional specialization of its occupants, being that members of a specific profession grouped themselves together within a particular area of the city.²⁸ These specialized markets are in contrast to the *suwayqahs*, which were rather unspecialized markets that provided daily provisions along with other goods.²⁹ Further, the *suwayqahs* were smaller in size than the city's *sūqs* being generally no more than ten shops.³⁰

What follows now is a survey of the various commercial spaces of Cairo that were engaged in the selling and distribution of foodstuffs.³¹ This listing and their descriptions are based on those provided in al-Maqrīzī's *Khiṭaṭ*, written at the beginning of the fifteenth century CE. Oftentimes al-Maqrīzī has informed the reader of historical changes

²⁴ For an overall discussion of the terminology, see: Raymond, *Les Marchés*, 27-36.

²⁵ "Sūq," *Encyclopaedia of Islam, Second Edition*, ed. by P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs, Brill Online, 2014, [Reference](#), American University in Cairo.

²⁶ Ibid.

²⁷ Raymond, *Les Marchés*, 28. Translation: "... a series of shops along a covered street covered with a roof of wood or stone, and closed by gates at two ends."

²⁸ "Sūq," *Encyclopaedia of Islam*.

²⁹ Raymond, *Les Marchés*, 28.

³⁰ Ibid.

³¹ Regarding the organization of the survey, I have followed al-Maqrīzī's order in discussing the markets of Cairo in volume two of the *Khiṭaṭ*. However, extra references from volume one and from other chronicles will be included and are noted accordingly. Those markets that do not fit the traditional typographies above or are not listed in al-Maqrīzī's section on markets will be listed at the end of the survey.

that various markets have undergone, which gives insight into the condition of the markets in the earlier Mamlūk period as well. Where possible, this study has attempted to corroborate al-Maqrīzī's descriptions with those of other chroniclers. Even so, this survey is heavily reliant on al-Maqrīzī. While the annalist was incredibly thorough, the reader should be aware of the imperfection that exists as a consequence of this limitation.

SURVEY OF THE FOOD MARKETS³²

Covered Markets – Qaysārīyyah

Qaysārīyyah of 'Ūṣfur (Covered Market of Safflower)

Located along the Qaṣabah, Cairo's main boulevard (discussed below), this covered market was known as the place where safflower was ground.³³ Al-Maqrīzī states that the founder, 'Alam al-Dīn Sanjar al-Surūrī, and his family initially retained the market until it was transferred to benefit the judge (*qādī*) Nāṣir al-Dīn Muḥammad ibn al-Barīzī al-Ḥamawī, who was serving as the head of the chancellery during the reign of al-Mu'ayyad Shaykh (*r.* 815-824/1412-1421).³⁴ This transfer occurred in 816/1413; at which time, the amber merchants were located in the covered market. After they left in 818/1415, the *qaysārīyyah* reverted back to its original holders and continued to produce safflower.³⁵

Qaysārīyyah of Ibn Yaḥya

The only other covered market referenced by al-Maqrīzī related to food is that of the Qaysārīyyah of Ibn Yaḥya, although the author does not state the nature of the food

³² This survey is drawn predominantly from primary sources, especially al-Maqrīzī. However, after having used those sources extensively for the majority of initial research, the author has also greatly benefitted from *Les Marchés du Caire* by André Raymond and Gaston Wiet. This source is an invaluable resource to any researcher of the commercial and economic activity of city throughout the Mamlūk period and helped to clarify several points. *Les Marchés* also aided the author in finding references to other sources, which has greatly helped to supplement the material provided in al-Maqrīzī.

³³ al-Maqrīzī, *Khiṭaṭ*, II:89.

³⁴ Ibid.

³⁵ Ibid.

products therein. It was situated amongst the markets of the bird-sellers and the confectioners. The hall was completely demolished by al-Maqrīzī's time, and nothing remained of it.³⁶

Sūqs

*Al-Qaṣabah*³⁷

The Qaṣabah was the major artery or thoroughfare that traversed the entirety of the city from the northern district of Ḥusaynīyyah, continuing southward through Cairo *intra muros* (al-qāhirah), before terminating on “the sands” near the Mausoleum of Nafīṣah.³⁸ One is told by al-Maqrīzī that the boulevard contained twelve thousand shops (*ḥānūt*).³⁹ Meanwhile, al-Qalqashandī tells that the Qaṣabah formed a continuous market.⁴⁰ Regarding what most certainly was a spectacular sight, al-Maqrīzī describes the liveliness of the street, the greatness of Egypt's environment in sustaining such richness, and the immense wealth of its inhabitants that they could waste money without a care:

I have indeed come to this interval at its fullest extent and I saw it filled with shops full of foods, drinks, and all kinds of goods, beautiful to look at, the arrangement of which forms an enchanting glance and whose diversity defeats any statistics... All the people I approached boasted of the environmental superiority of Egypt to other countries. In the capital of Egypt, they said, every day it gets rid of waste thrown into the hills of rubble and garbage dumps worth a thousand gold dinars.⁴¹

We are not told in the section of the *Khīṭaṭ* regarding markets what foods were sold immediately along the route; nor does al-Maqrīzī mention specific *sūqs* here. Instead, his discussion of the Qaṣabah seems to be written to astound the reader and express the luxuriousness and wealth of Cairo's main artery. In an earlier section, however, he says

³⁶ Ibid., II: 90.

³⁷ Ibid., II: 94-95.

³⁸ Ibid., II: 95.

³⁹ Ibid.

⁴⁰ al-Qalqashandī, *Ṣubḥ*, III: 337.

⁴¹ al-Maqrīzī, *Khīṭaṭ*, II: 95.

that he remembers that the sellers of fried bird-meat used to sit in a row that stretched along the route from al-Kāmil's madrasah⁴² to that of al-Nāṣir Muḥammad⁴³.⁴⁴ It is also clear that milk, cheese, and cooked meals were served and sold along the route as the utensils from their sales are among the detritus discarded to the trash heaps outside the city.⁴⁵

More specifically regarding the foods along the route, al-Maqrīzī gives a tour of the Qaṣabah at length in the section of the *Khiṭaṭ* concerned with the various quarters of the city. Here, he lists a feast of food options along the boulevard. Along the great avenue (*al-shāri' al-a'ẓam*) were several of the markets mentioned throughout this survey alongside some others not mentioned in volume two's section on markets. Here is found the Market of Grain and Seed Sellers (*fāmiyyīn*, also *abāzīrah*) and the old Market of the Sellers of Birds (*al-tuyūriyyīn*) before it became the Market of Cages (*al-qaffāṣīn*). He also mentions the Mosque of the Fruit-Sellers (*al-Fakahānī*)⁴⁶, the Market of the Sweets and Biscuit Makers (*ḥalāwiyyīn/ka'akiyyīn*), the center of poultry sellers (*suknā al-dajjājīn*), and three markets of victuals (*muta'ayyishīn*) which were Sūq Bāb al-Futūḥ, Sūq Bāb al-Zuhūmah, and Sūq al-Ḥārat al-Barjawān (mentioned below). He also states that the market of wheat sellers (*qammāḥīn*) could be found near the Mosque of al-Aqmar⁴⁷.⁴⁸

Sūq Bāb al-Futūḥ (Market of Bāb al-Futūḥ)

“This is one of the largest [markets] in Cairo, one of the busiest *sūqs*, because people come from all parts of the city to buy all kinds of meat, mutton, beef, goat, and all

⁴² *Index of Mohammedan Monuments in Cairo*, no. 428; built in 622/1225.

⁴³ *Index of Mohammedan Monuments in Cairo*, no. 44; built in 694-96/1294-96.

⁴⁴ al-Maqrīzī, *Khiṭaṭ*, II: 29.

⁴⁵ *Ibid.*, II: 95.

⁴⁶ *Index of Mohammedan Monuments in Cairo*, no. 109; built in 1184/1736.

⁴⁷ *Index of Mohammedan Monuments in Cairo*, no. 33; built in 519/1125.

⁴⁸ al-Maqrīzī, *Khiṭaṭ*, I: 373-377.

varieties of vegetables.”⁴⁹ Located within the Bāb al-Futūh,⁵⁰ the city’s northern gate, to the beginning of the Ḥārat Bahā al-Dīn, both sides of the market were filled with the shops of the butchers (*lahḥāmīn*), greengrocers (*khudariyyīn*), grain and seed sellers (*fāmiyyīn*), merchants of sliced meat (*sharāyihīyyah*), and other sellers of foodstuffs. Al-Maqrīzī says that this is not one of the older markets in the city and was built when Qarāqūsh (grand vizier to the Ayyūbid sultan Ṣalāḥ al-Dīn Yūsuf ibn Ayyūb [r. 567-589/1174-1193]) came to live in the area.

Sūq Khān al-Rawwāsīn (Market/Khān of Sheep-Heads)

Located near the beginning of the Sūwayqah of Amīr al-Juyūsh, the market is referred to by al-Maqrīzī with the double appellation of *sūq khān* because the market had within its midst the *khān* in which the steamed heads of sheep were prepared. He states that it was once one of the finest markets with twenty shops, many renters, and sold all sorts of victuals.⁵¹

Sūq Ḥārat al-Barjawān (Market of the Quarter of al-Barjawān)⁵²

Between the Sūq Khān al-Rawwāsīn and the Market of the Candle Makers (*shammā‘īn*), the market was one of the oldest in the city existing from the Fatimid period.⁵³ During that time, the market was called the Sūq al-Amīr al-Juyūsh (Market of the Commander of the Armies), which was a reference to the Fatimid general and vizier Badr al-Jamālī (405-486/1015-1093) and is to be distinguished from the Sūwayqah of Amīr al-Juyūsh.⁵⁴

Regarding the goods sold in the market, al-Maqrizi writes that it was so well supplied that those living nearby had no need to visit any other market. This certainly

⁴⁹ Ibid., II: 95.

⁵⁰ *Index of Mohammedan Monuments in Cairo*, no. 6; built in 480/1087.

⁵¹ Ibid.

⁵² Ibid., II: 95-96.

⁵³ Ibid., II: 95, 418; al-Qalqashandī, *Ṣubḥ*, III: 356.

⁵⁴ al-Maqrīzī, *Khīṭat*, II: 95-96.

appears to be true when one reads of the many foods and vendors inside: the meat of skinned sheep (*salīkh*), scalded meat (*samīt*), beef, olive oil merchants (*zayyātīn*), cheese sellers (*jabbānīn*), bakers (*khabbāzīn*), milk sellers (*labbānīn*), cooks (*ṭabbākhīn*), sellers of grilled meat (*shawwā‘īn*), sellers of jellies and condiments (*bawāridiyyah*), green grocers (*khuḍariyyīn*), and many other diverse foods. Also specifically mentioned were leeks, fennels, and mint.⁵⁵ Al-Maqrīzī also tells of many non-food goods that are not listed here. In total, he creates a picture of a large market that fulfilled the daily needs of the surrounding neighborhood by supplying it with every sort of comestible and household product.

Sūq al-Dajjājīn (Market of the Poultry Sellers)⁵⁶

The Market of the Poultry Sellers (*al-dajjājīn*) was next to the Market of the Candle Makers and extended as far as the Market of the Vault of the Khurunfish (*qabw al-Khurunfish*). It sold “chicken and geese of unimaginable numbers” as well as many other types birds; on Friday mornings especially, the market sold doves, nightingales, robins, parrots, and quails.⁵⁷ Al-Maqrīzī tells a charming story of children buying sparrows (*‘asāfīr*) and then setting them free, for they were told that freeing a sparrow would gain them entrance to Paradise.⁵⁸ The sparrows sold for a mere copper coin, whereas quails (*simān*) could sell for eight hundred dirhams and some songbirds (*tīyūr al-masmūw‘a*) for thousands: “as the bird makes more sounds, the more expensive the price becomes.”⁵⁹ It appears that in the end, the market was torn down by the Aytmiş al-Bajāsī al-Zāhirī and was replaced by stores for olive oil merchants and other similar vendors; only a few stores for selling poultry remained.

⁵⁵ Ibid., II: 96.

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Ibid.

⁵⁹ Ibid.

Sūq Bayn al-Qaşrayn (The Market of the Between the Palaces)

Formerly the sight of the Fatimid parade grounds between the former Fatimid palaces, the Bayn al-Qaşrayn area was said to have held ten thousand horsemen as easily as pedestrians. After the fall of the dynasty, the area was converted into a market. Al-Maqrīzī says that it was reported to be the largest in the world.⁶⁰ This market was described in the part of the *Khiṭaṭ* devoted to the city's various quarters and is discussed above in the section on the Qaşabah.

*Sūq Bāb al-Zuhūmah*⁶¹

Once the location of one of the gates of the Fatimid palace, the Sūq Bāb al-Zuhūmah was the location of the city's moneychangers, among many other things. It also was here in which dried fruits (*nuqaliyyīn*) were sold. Among the dried fruits were pistachios, almonds, raisins and other similar goods. The market was famous in the city and renowned for the quality of its foodstuffs.

That said, al-Maqrīzī does tell of a scandal that occurred within the market. It must be concluded that the anecdote's inclusion speaks to the rarity of its occurrence.

A situation happened in the *sūq*, it is appropriate to report because of its strangeness in our time. The *muḥtasib* (market inspector) of Cairo went on Saturday, 16 Ramadan 742 / 23 February 1342, to search the premises of a dealer in condiments (*bawāridī*) located in the *sūq* named Muḥammad ibn Khalaf, who had in his storeroom, for the last fifty days, pigeons and starlings from which emanated a smell. The search led to the discovery of 34,196 birds, including 1,196 pigeons and 33,000 starlings, all decaying, hence this unbearable stench. The *muḥtasib* punished him and publicly humiliated him.⁶²

*Sūq al-Halāwiyyīn*⁶³ (Market of the Sweet Sellers)

⁶⁰ Ibid., II: 97

⁶¹ Ibid.

⁶² Ibid.

⁶³ Ibid., I: 90, II: 99-100.

The Sūq al-Ḥalāwiyyīn was located in the center of the larger Sūq al-Ka‘akiyyīn (Market of the Biscuit Sellers) near the southern gate Bāb al-Zūwaylah. The Sūq al-Ka‘akiyyīn is not mentioned in the section on the markets of Cairo but is briefly discussed in the section on the city’s quarters.⁶⁴ The baking of biscuits and those of sweets and pastries were clearly symbiotic industries, and the shared location of both markets makes sense within this context.

Al-Qalqashandī describes a busy place with a hundred workers and another one hundred attendants.⁶⁵ Al-Maqrīzī writes in detail about the various sweets available. He describes an enormous variety of cakes, pastries, and other sweets. He also tells of displays of dried fruits, cheeses, and cucumbers intermixed with pottery shards filled with milk. The displays, upon closer examination, appeared to be entirely made of sugar. During the month of Rajab, similar sweets were on display: lions, horses, cats and other animals were molded from sugar and suspended on wires to be displayed in shops. The visiting traveler, al-Baghdādī was equally impressed by the variety of confections offered saying that there were so many he would need an entire book to describe them.⁶⁶ In preparation for the *‘id al-fīṭr* (Feast of Breaking the Fast), marking the end of Ramaḍān, the cooks of the Sūq al-Ḥalāwiyyīn began making sweets and pastries several weeks in advance and all of the markets of Cairo and its environs were full of confections.⁶⁷ Al-Qalqashandī even tells that during the Fatimid period, the caliph and his vizier would visit the market and oversee the end of Ramaḍān preparations.⁶⁸

Sūq al-Shawwā’īn (Market of the Rotisserie/Grilled Meats)⁶⁹

⁶⁴ Ibid., I: 373.

⁶⁵ al-Qalqashandī, *Ṣubḥ*, III: 529.

⁶⁶ al-Baghdādī, *Riḥla*, 119.

⁶⁷ al-Maqrīzī, *Khīṭaṭ*, II: 100.

⁶⁸ al-Qalqashandī, *Ṣubḥ*, III: 529.

⁶⁹ al-Maqrīzī, *Khīṭaṭ*, II: 100.

At the center of a large market for foodstuffs was the Sūq al-Shawwāʾīn, which al-Maqrīzī records as the oldest in Cairo. Originally founded in 365/975 as a market for sliced (*sharāyihīyyah*) meat, the market became known for grilled meat in the year 700/1301. The edge of the market extended just outside of the Bāb al-Zūwāyilah where some other food stalls could be found selling cheeses and other victuals.⁷⁰

*The Street Outside the Bāb al-Zūwāyilah (al-shāri‘ khārij Bāb al-Zūwāyilah)*⁷¹

In this section, the reader is told about the various sights and markets in the area south of the city on the roads leading away from the Bāb al-Zūwāyilah; one lead to towards the citadel to the south-east while the other went nearly due south towards Ṣalībah Street and the Pond of the Elephant (*Birkat al-Fīl*).⁷²

Suwayqahs – Small, Local Markets

Al-Maqrīzī mentions many *suwayqahs* at the end of his section on the markets of Cairo. As many of his references to the *suwayqahs* are only to their locations and not necessarily to their contents, it is not entirely clear whether all of the *suwayqahs* in the city contained food provisions. These smaller markets were built to service their local neighborhoods, and their construction was part of the process of urbanization. André Raymond has suggested the connection between the building of small markets and shops and the promotion of urban expansion into new neighborhoods. In describing the settlement of the Ḥusaynīyyah area to the north of the city, Raymond states that there were a “number of nonspecialized markets (*suwaqqat*) [sic], which... indicate the urbanization of the area.”⁷³ A similar pattern can be seen as part of efforts to expand the city to its west and south throughout the early fourteenth century CE.⁷⁴ Using these

⁷⁰ Ibid.

⁷¹ Ibid., II: 100-101.

⁷² Ibid., II: 101.

⁷³ Raymond, *Cairo*, 124.

⁷⁴ Ibid., 123-127, 132-135.

markets, as well as constructing other important and vital structures such as mosques, was part of the way in which the regime practiced urban planning. Thus, in addition to the ways in which the Mamlūk regime influenced the food economy, it also used an aspect of that system – the markets – in order to advance other goals.

The *suwayqahs* related to Cairo's northern expansion, as discussed by Raymond, were many. Al-Maqrīzī goes into detail on several of these particular small markets, and his descriptions help to show how the nature of these markets varied as well as points to their importance in their surrounding communities. In promoting expansion to the north, the construction of the Mosque of Baybars⁷⁵ was an initial catalyst in spurring growth into the area. Additionally, in its immediate surroundings was the *Suwayqat Jāmi' al-Malik* (Market of the Mosque of al-Malik), which al-Maqrīzī specifically mentions as selling foodstuffs, fruits, and vegetables.⁷⁶ Another important market of the northern area Ḥusaynīyyah district was the *Suwaywat al-'Arab* (Market of the Arabs). This market was unique in that it had brick vaulting. Al-Maqrīzī says the *suwayqah* thoroughly served the local inhabitants until it was devastated in the famine of 776/1374. In the fifteenth century CE, nothing remained except ruins. The chronicler makes special note of one of its bread ovens, which supposedly served seven thousand loaves a day.⁷⁷ Showing the importance and growth of the neighborhood, al-Maqrīzī also mentions several other *suwayqah* in the Ḥusaynīyyah area including: *Suwayqat al-Ramlah* (Small Market of the Sand) and *Suwayqat Abū Zuhīr*.⁷⁸

To the south of the city, near the citadel, the *Suwayqat al-'Izzī* was built on the site of a former Fatimid cemetery outside of the city walls.⁷⁹ The market was named after

⁷⁵ *Index of Mohammedan Monuments in Cairo*, no. 1; built in 667/1269.

⁷⁶ al-Maqrīzī, *Khīṭaṭ*, II: 106, 139.

⁷⁷ *Ibid.*

⁷⁸ *Ibid.*

⁷⁹ *Ibid.*, II: 106-107.

a former officer in al-Ashraf Khalīl ibn Qalāwūn's army that captured Acre in 690/1291 and was part of encouraging the settlement of the areas south of the Bab al-Zuwāyilah. The market remained active in al-Maqrīzī's time, and Raymond remarks that the market continued to be important into the eighteenth century CE.⁸⁰

While most *suwayqah* were nonspecialized, a few were known for selling specific goods. One of these specialty *suwayqah*, was the Small Market of the Turnips (*Suwayqat al-Lift*), which was once notable for its sale of turnips and cabbage. These items were distributed throughout the city from the market. Although by al-Maqrīzī's time, it had ceased to function accordingly.⁸¹ Similarly, the *Suwayqat al-'Ayyāṭīn*, located in the *al-Maqs* neighborhood, was known for selling honey and other commodities.⁸²

This overview of the *suwayqahs* of Cairo during the Mamlūk period certainly does not include every local food market in the city. Nor does al-Maqrīzī's sections on the larger markets and commercial structures exhaust the entirety of those entities either. Other small, local markets were certainly located within the *ḥārahs* (the small alleyways that helped to organize life within medieval Cairo).

With regards to the food activities of the local *ḥārah*, Arnold von Harff, a knight from Cologne, states that Cairo had 24,000 lanes (presumably the *ḥārah*), and "a cook and two bread bakers are provided for each street, so that there are in the town 24,000 cooks and 48,000 bread bakers."⁸³ While von Harff mentions cooks and not necessarily raw food vendors, the point is clear: there was an immense amount of food selling and production going on outside of the several markets specifically named by al-Maqrīzī. The larger markets in the *Khīṭaṭ* were generally the places where food supplies were gathered and then sold or distributed to the lesser markets of the city and its many street kitchens.

⁸⁰ Ibid.; Raymond, *Cairo*, 132.

⁸¹ al-Maqrīzī, *Khīṭaṭ*, II: 106.

⁸² Ibid.: II: 94.

⁸³ von Harff, *Pilgrimage*, 109.

Roving peddlers also sold some food goods directly to customers in streets as they passed. Sometimes they even made their sales in front of the shops of other established vendors and cut the price so as to undersell their more permanent competitors. This often caused problems and the merchants frequently complained to the market inspector on this regard.⁸⁴ All of this points to a lively and competitive market scene, one in which all of Egypt's foods could be bought and sold. In the pre-industrial world, where most economies, including Egypt, were agriculturally based, it should come as no surprise that references to the variety and plentitude of the Cairo's food markets were used as illustrative of the wealth of the sultanate by Medieval chroniclers and foreign visitors alike.

CRISES, TRANSFORMATIONS, AND THE FOOD MARKETS OF CAIRO

This state of bounty and plentitude, however, was not a certainty and was predicated on the successful and efficient functioning of the entire system of Mamlūk Egypt's food economy. As has been explored in the previous chapters, this system came under strain as a result of depopulation from the plague and faced various other changes throughout the Mamlūk period. Looking at the nature of Cairo's food markets is helpful in reflecting both this tension and these transformations.

The clearest place in which the problems of the Mamlūk economy can be seen is in the inflationary trends of the fifteenth century CE.⁸⁵ Contemporary scholars have explored this topic at length, but most of these studies focus on the monetary policy of the Mamlūk regime and not structural problems within the economy like depopulation.⁸⁶ As

⁸⁴ al-Maqrīzī, *Khīṭaṭ*, II: 100 (cited in Fernandes, "The City," 521-522).

⁸⁵ Boaz Shoshan, "Grain," 477; Ashtor, *Histoire*, 286-306, 455-456.

⁸⁶ This issue of contemporary scholarship neglecting the effects of the plague as a seminal cause of the economic crises of the later Mamlūk period is discussed at length in Chapter One. See: Ashtor, *Histoire des prix et des salaires dans l'Orient médiéval*, (Paris: Service d'édition et de vente des publications de l'Éducation nationale, 1969); idem, *A Social and Economic History of the Near East in the Middle Ages*, (Berkeley and Los Angeles: University of California Press,

stated in Chapter One, some scholarship – like that of Dols and especially Borsch – has successfully shown that the demographic effects of the plague were at the center of the causes of the crises of the later period. While exploitation and malfeasance certainly may have occurred at the hands of the ruling regime, these problems were probably symptoms of a larger problem rather than causes in and of themselves. If understood in this way, the rampant problem of inflation throughout the later period can be seen as a result of an economy set off balance by low productivity, especially agricultural, on account of depopulation.

Leaving the debate on the causes of inflation aside, price rises were a real problem concerning Egyptians in the late fourteenth and fifteenth centuries. During this time, price inflation and food shortages – often interconnected – had a major effect on the wellbeing of the Mamlūk city.⁸⁷ Complaining about these periods of high prices (*ghalā'*), al-Maqrīzī wrote an entire treatise on the mismanagement of the Mamlūk economy: *Ighāthah al-Ummah bi-Kashf al-Ghummah*.⁸⁸ Al-Maqrīzī's concerns were real and had a pressing urgency for the Mamlūk regime. The price inflation and food shortages of the period were extremely threatening to the stability of the ruling elite and were frequently the cause of civil disturbance and rioting.⁸⁹ As a consequence, sultans would often open their wheat and grain holdings in order to avert crisis and would punish amīrs and grain dealers who, looking to take advantage of high prices, would manipulate the market.⁹⁰ Even still, not all emergencies could be avoided and inflation and shortages were a condition of the later

1976); and, Boaz Shoshan, "Money, Prices, and Population in Mamluk Egypt, 1382-1517," PhD diss., (Princeton University, 1978).

⁸⁷ Lapidus, *Muslim Cities*, 31.

⁸⁸ Adel Allouche, *Mamluk Economics: A Study and Translation of al-Maqrizi's Ighathah*, (Salt Lake City: University of Utah Press, 1999). Allouche goes to great lengths to explain the definition of the term *ghalā'* along with other tricky economic vocabulary issue from the period. See also: John L. Meloy, "The Merits of Economic History: Re-Reading al-Maqrizi's *Ighāthah* and *Shudhūr*," *MSR* 7(2), 2003: 183-203.

⁸⁹ Shoshan, "Grain Riots," 465-475.

⁹⁰ *Ibid.*

period.

Inflation and shortage were not the only economic problems to be played out in Cairo's markets. Death due to the plague was not a solely rural phenomenon; its effects on Egypt's urban regions and their subsequent depopulation had great consequences for Cairo's food markets as well. Furthermore, a weak flood in 806/1403, which was followed by a famine, was the death knell to an already teetering economy. These events pushed the city's devastation even farther and hindered any possibility of recovery.⁹¹ Al-Maqrīzī describes the city's abandoned neighborhoods following a century wrecked by the effects of recurring bouts of the plague and then the horrendous famine of 1403 CE. In telling of the fate of the quarters, Raymond quotes al-Maqrīzī at length. Regarding one northern neighborhood, he states,

“Husaynīyya [sic] was the most prosperous artery of Old Cairo and Cairo... [It was full of sūqs and residences, and its streets were full of vendors, pedestrians, food sellers, jugglers and acrobats.” Then came “the lamentable events of 1403” and the following years: “Its quarter fell into ruin, its buildings turned into rubble, which was sold for materials, the beams especially, and its population moved away.”⁹²

A similar situation could be found throughout the city, especially in the areas around the walled Fatimid city into which urban expansion occurred during the early fourteenth century CE.⁹³ This depopulation also could be seen in the city's markets. While Al-Maqrīzī has often been criticized by contemporary scholars of being a doomsayer, on the topic of food markets, at least, his descriptions are corroborated with other evidence. Looking at the economic impact of the plague, seeing the effects of it on transportation, loss of territory, and most importantly, agricultural decline, al-Maqrīzī's description of the food markets of Cairo fits the narrative of major disruption and transformation in the

⁹¹ Raymond, *Cairo*, 146-147.

⁹² *Ibid.*, 147-148.

⁹³ *Ibid.*, 146.

food economy of the fifteenth century CE.

His account of Cairo's commercial structures reads like an elegy. Market after marketplace is either closed, in ruins, or a shell of its former self. In these sections, he mentions: twenty-two caravanserais, two of which dealt with food; eleven *funduqs*, three of which were related to food; and thirty-three *sūqs*, ten of which selling food products.⁹⁴ Finally, he describes sixteen *suwāyqahs*, which by the definition above, probably all sold some sort of food.⁹⁵ This means that of the eighty-two commercial structures detailed by al-Maqrīzī, thirty-one of them – or thirty-eight percent – were involved in food activities. Excluding the small markets, *suwāyqāt*, of the fifteen food-related commercial structures of his time, nearly every one – thirteen, in fact – is described as either being diminished, closed, or completely ruined.⁹⁶ Most of the *suwāyqah* were probably also devastated, as many of the neighborhoods they serviced were deserted.

In describing the formerly magnificent artery through the city, al-Maqrīzī states that the Qaşabah was completely ruined with most of the shops gone or abandoned by their owners.⁹⁷ The Market of the Quarter of al-Barjawān, once one of the largest and most important, was completely abandoned and nothing remained.⁹⁸ Regarding Sūq Bayn al-Qaşrayn (The Market of the Between the Palaces), al-Maqrīzī laments how it was only a shadow of its former past.⁹⁹ Finally he says about the Market of Bāb al-Futūḥ that during the early fifteenth century CE the market had lost some of its importance – with many of the shops closed or bare – but it still remained active.¹⁰⁰ Beyond depopulation, al-Maqrīzī's discussion of the decaying production of the Confectioner's Sūq is evocative

⁹⁴ al-Maqrīzī, *Khīṭaṭ*, II: 86-108.

⁹⁵ *Ibid.*, II: 94 – 108.

⁹⁶ *Ibid.*, II: 86-108.

⁹⁷ *Ibid.*, II: 94-95.

⁹⁸ *Ibid.*, II: 95-96.

⁹⁹ *Ibid.*, II: 97

¹⁰⁰ *Ibid.* II: 95.

of economic contraction.¹⁰¹ Ibn Duqmāq shows the immediate cause: of the sixty-six sugar refineries in Old Cairo, only nineteen were continuing to function.¹⁰² In total, one finds in al-Maqrīzī's tale the devastation caused by massive loss of life due to the plague and the subsequent crises and disruptions to the Mamlūk economy.

The markets were not only reflective of the unfortunate realities of the economy during the later period. Additionally, looking at these commercial spaces can show how the market system was reactive to other transformations within the food economy. During the Fatimid era, the markets of the wheat and grain sellers were located along the immediate western portion of the city, alongside the Fatimid palace and in the area near the al-Aqmar Mosque. By al-Maqrīzī's time, these markets had shifted to the northwestern portion of the city; some of the markets were also located in maydāns outside of the city.¹⁰³ In both cases, however, their new orientation reflected the rise of Būlāq as a growing port for the city. The continuing presence of other grain warehouses and flour mills in Old Cairo is also evinced in the continued existence of the Market of the Biscuit-makers in the south of the city.¹⁰⁴ The presence of major fruit and vegetable vendors at the Sūq Bāb al-Futūḥ and the Dār al-Tuffāḥ at the cities gates (northern and southern respectively) shows that markets corresponded to the geographic realities of distribution, as the city's supplies of fresh fruits and vegetables – from the environs around the city – would have first arrived at the gates. Similarly, the placement of the two commercial structures dedicated to Syrian products – Wakālat Amīr Qawṣūn and Wakālat Bāb al-Juwwanīyyah – near the city's northern wall reflects the fact that these goods would have arrived at that wall's corresponding gates. Lastly, the Confectioner's Sūq was

¹⁰¹ Ibid., I: 90, II: 99-100.

¹⁰² Ibn Duqmāq, *al-Intiṣār*, 1:41–46.

¹⁰³ al-Maqrīzī, *Khiṭaṭ*, II: 27, 124, 257, 460.

¹⁰⁴ Ibid., I: 373, II: 99-100.

also found in the south of the city near the Bāb al-Zuwāylah, and this corresponded to the aforementioned presence of the sugar refineries of Old Cairo.

That the markets of Cairo were barometers for the well-being of Egypt's economy is immediately clear in looking at the preceding survey and subsequent discussion. In the early period, Cairo's food markets were at the center of a city bustling with commercial activity and offered every imaginable good available. From singing birds to used clothes there was nothing that could not be obtained. The food markets were no exception: sugar dolls suspended on wires, boiling pots of meat balanced on porters' heads, and loaves of bread baking in every quarter. The city of Cairo contained a lavish offering for its inhabitants and caused envy in its visitors. The dramatic depopulation of Egypt and the strain that it placed on the entire Mamlūk economy changed this portrait, and judging by the chronicles of the time, the markets never recovered.

CONCLUSION

Looking at the complexities and organization of the Mamlūk food economy from farm to fork, one can immediately grasp the important position of food within the commercial life of medieval Cairo. The organization of Egypt's agricultural production – from land usage to the maintenance of irrigation works – evinces a society strongly centered on an agrarian economy. Transporting crops and food goods to Cairo and organizing their storage and distribution required great efforts on the part of the population to ensure efficiency and effectuality. Further, in order to respond to factors of supply and anticipate the city-dwellers' needs, Cairo's markets were coordinated within the urban space. All of these issues point to a highly systematic, orderly arrangement attempting to guarantee the well-being of the medieval city.

Such an organized structure necessarily contradicts the traditional Orientalist narrative of a disordered, haphazard, and random urban and societal arrangement. For such bountiful and rich markets to have been supplied and function, no aspect of the food economy could have been left to whim. In showing the mechanisms by which this system functioned, traditional assumptions about the disorganization of Middle Eastern societies may be further discredited. In addition, the customary suppositions of earlier scholars regarding the composition of the "Oriental" city as being anarchic and ill-planned – with design references only to the Great Mosque, i.e. Islam – can be disregarded in light of the highly logical spatial placement of Cairo's food markets within the urban environment. Both the intricate and involved management of the entire food economy and the market system show that traditional narratives of the Oriental city are unsupported when placed within the context of the realities and functioning of Mamlūk society.

Additionally, the ancient and modern descriptions of Egyptians as exhibiting passivity in the cultivation of their land and being the recipients of a blessed river

perpetuate a similar Orientalist narrative. Egyptians have always had to endeavor actively to reap the Nile's benefits. Egypt's irrigation system was far more complex than allowing water to wash over fields and recede away again. Rather instead, the system was built on an intricate network of canals, dykes, trenches, basins, dams, and levees. The timing of opening and closing these irrigation works was designed in order to maximize their effectiveness. Paradoxically, while the system was designed to harvest the flood, it was also a victim of its powerful waters; and the entire infrastructure was constantly in need of repair. All of this activity, the construction and maintenance of infrastructure, the opening and closing of dams and canals, the rerouting of water through trenches, required an immense exertion of labor and activity on the part of Egypt's population. The interaction between the rural laborer and his environment required an immense understanding of Egypt's ecological realities. Working within the constraints imposed by nature, the peasant attempted to maximize the productive yields of the land and make use of the Nile's annual flooding. Basing taxation and revenue generation on these activities, the Mamlūk ruling class also shaped the production of foodstuffs by monitoring crop rotation and overseeing the construction and maintenance of Egypt's irrigation network. The ongoing dialectics between the farmer and Egypt's environment and the peasant and the Mamlūk regime were, therefore, two of the defining phenomena that shaped the patterns of food production within the Mamlūk economy.

The organization of Mamlūk Egypt's food distribution network and the system of transportation designed to bring goods to market were also heavily reliant upon the efforts of the Egyptian laborer and similarly shaped by the hand of the regime. Navigating the Nile was no easy task, even when fully inundated; grounding was a constant threat and the menace of banditry loomed on the river's banks. Transportation by overland caravans was also risk filled, and transportation by land was an immensely challenging

proposition. In light of these difficulties, the state endeavored to protect and escort caravan routes, build bridges along their course, and in many ways facilitate the movement of goods. Additionally, in requiring merchants to pay taxes and duties at specific border crossings and ports, wharfs and warehouses, the regime also helped to shape the transportation system. The division of goods into the ports of Būlāq and Old Cairo, which was initially a response to geographic realities, was perpetuated and persisted as a consequence of the division of grain by the regime as well as the location of various key industries. In these ways and others, the Mamlūk ruling class had an ongoing interest in maintaining the efficient functioning of the transportation system; and while it organized and channeled some of the activities of that network, it was in the interest of the regime to allow the merchant and boatmen to labor within it unencumbered by overly burdensome restrictions. It was their work and knowhow, after all, that kept the network running.

By illustrating the labor-intensiveness of producing and supplying Mamlūk Cairo's food markets, the present study has further deconstructed the narrative of the passive Egyptian and shows the agency and significance of the voiceless, individual members of Mamlūk society. This importance of the population in Mamlūk society has been downplayed by a traditional scholarship that focuses on the deeds and politicking of sultans and princes. Following this narrative, the vices and whims of the ruler and ruling elite single-handedly direct the course of Egyptian history. Most of the economic history of period has been viewed with this historiographical lens and our understanding of the period has generally been shaped by it. As such, shortages and inflation, the breakdown of the irrigation system, and the disintegration of the Mamlūk system and weakening of the state have been viewed as the consequences of wicked leadership, corruption and greed, malfeasance, and general incompetence. Examining the labor and industry required

at every level of the food economy shows the importance of the peasantry and laborers to perpetuating that system.

These generally invisible historical actors' criticality is further highlighted by the system's breakdown in their absence. With the arrival and frequent recurrences of the plague, huge numbers of people in Mamlūk society were removed – rich and poor, urban and rural, intellectual and uneducated alike. It was with the Black Death's demographic effects on Egypt's rural peasantry, however, that depopulation was most extreme. The decline in this sector of the Mamlūk population had the greatest effects on the overall system. Without the labor force required to maintain the complex farming and irrigation system described, the entire agricultural complex was undermined. Crop yields and production drastically plunged as irrigation systems broke down, the Nile's flood became increasingly uncontrollable, and land tillage became less frequent. The final result was an agrarian society that was significantly less capable of supporting its key industry and whose major economic sector suffered from serious deterioration.

Mamlūk Cairo's markets were barometers of this pattern of economic decline. With increasing numbers of markets closed or shells of their former selves, it was evident in the city's markets that the entire food network was under great strain. Just as the constructions of *suwayqahs* may be taken as indicative of urban expansion, their closure and destruction can be understood to reveal a reversal in the city's urbanization and a contraction in its population. Seeing the markets as reactionary to economic realities shows that beyond mere crises there were systemic problems in the overall agricultural system which corresponded to major declines in crop yields. Furthermore, looking at the markets as reflective of the overall system, this study has shown how the location of the city's marketplaces were also responsive to issues of proximity to transportation and to the various warehouses involved in Cairo's food provisioning. Whether in relation to the

changing location of a port or the fluctuating health of the economic system, that the markets evinced changing economic realities is clear.

The loss of revenue as a result of the breakdown of the agricultural system had far-reaching effects on the Mamlūk system. Monetary policies were adopted to cope with the new reality, administrative changes were undertaken, and a structure of governing built on a military complex was less and less able to finance its own existence. From rising political instability within the ruling elite to a greatly diminished military capacity, the functions of regime were increasingly threatened and compromised, which led to the sultanate's final demise at the end of the fifteenth century CE.

Understanding the role of the food economy, therefore, is of absolute importance in interpreting the various factors leading to the changes that occurred in the later fourteenth and throughout the fifteenth centuries. This appreciation then can help the historian to reevaluate tradition narratives of the events of the Mamlūk period and can help in constructing, or at least offer support, in assessing the real nature of the various economic changes that occurred throughout the era. In doing so, perhaps a new portrait may be revealed; one in which the place of peasant, the barge boatman, and the market vendor may be appreciated alongside that of the sultan and ruling elite.

TABLE 1: COPTIC MONTHS AND THE AGRICULTURAL YEAR

Coptic Month	Gregorian Month ¹	Nile Stage ²	Sowing/Harvesting Schedule	Agricultural Seasons ³	
1 Tūt	29 August	Nile reaches maximum in the middle of Tūt		FLOODING SEASON	
1 Bābah	28 September	Nile recedes	Winter Crops Sown	WINTER (<i>shitā'</i>) GROWING SEASON	
1 Hatūr	28 October				
1 Kīyahk	27 November		Winter Crops Harvested		
1 Ṭūbah	27 December				
1 Āmshīr	26 January				
1 Baramhāt	25 February		Summer Crops Sown	SUMMER (<i>ṣayf</i>) GROWING SEASON	
1 Barmūdah	27 March				
1 Bashans	26 April		Summer Crops Harvested		
1 Bu'ūnah	26 May	Nile is at minimum level			
1 Ābīb	25 June	Nile begins to rise			
1 Misra	25 July	Nile continues rise			FLOODING SEASON

¹ Calculations for the conversion of dates between the Coptic and Gregorian calendar is a complex undertaking, made more difficult because of the change from the Julian calendar to the Gregorian calendar in the sixteenth century CE. Some secondary sources do not account for the changes that occurred in the conversion between the Julian and Gregorian calendar, and as such the Gregorian dates that these sources ascribe to the events of the Mamlūk period are slightly off. Pellat discusses this problem of dating and an explanation of his assiduous calculations, which are used here and throughout this thesis. See: Charles Pellat, *Cinq calendriers Égyptiens, Textes Arabes et Études Islamiques*, Tome XXVI, (Cairo: Institut Français d'Archéologie Orientale du Caire, 1986): VI-VII.

² These descriptions of the Nile stages are based on the Nile flood schedule under optimum conditions. The flood may have begun its rise, reached its maximum, or begun its descent before or after these dates. For a discussion of the average date on which various Nile flood events occurred, see: Āmin Sāmī Pāshā, *Taqwīm al-Nīl*, 2nd edition, (Cairo: Dār al-Kutub wa-l-Wathā'iq al-Qawmīyah, 2002): 55.

³ For an explanation of the winter/summer crop dichotomy, see pages 63-64.

TABLE 2: IBN MAMMĀTĪ'S CLASSIFICATION OF SOIL TYPES AS RELAYED BY AL-QALQASHĀNDĪ

Soil Type	Crop of Current Season	Crop of Previous Season	Irrigation or Cultivation Notes	Value	Source
<i>al-bāq</i>	Wheat (<i>qamḥ</i>) Flax (<i>kitān</i>)	Clover (<i>qurṭ</i>) Legumes (<i>qaṭṭānī</i>) Gourds (<i>maqātī</i>)	Not known; Presumably Well Irrigated	Most Valuable; Highest Taxed	<i>Ṣubḥ</i> 3:450 <i>Khiṭaṭ</i> 1:100
<i>riy al-sharāqī</i>	Not Known	Not Known	Not Irrigated in Previous Season; Heavily Irrigated in Current Season	Taxed at the same level as <i>al-bāq</i>	<i>Ṣubḥ</i> 3:450 <i>Khiṭaṭ</i> 1:100
<i>al-barūbiya</i>	Clover (<i>qurṭ</i>) Legumes (<i>qaṭṭānī</i>)	Wheat (<i>qamḥ</i>) Barley	Planted with clover and legumes to return to the quality of <i>al-bāq</i>	Taxed at a lower level than <i>al-bāq</i>	<i>Ṣubḥ</i> 3:450 <i>Khiṭaṭ</i> 1:100
<i>al-buqmāha</i>	Flax	Sometimes Wheat (<i>qamḥ</i>)	If cultivated with wheat in previous season, crop would be poor and not-profitable	Lower than <i>al-barūbiya</i>	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-shatūniya</i>	No cultivation	Not Known	Irrigation in previous season	Lower than <i>al-sharāqī</i>	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>shiqq shams</i>	Produced high quality crops	No cultivation	Irrigated and plowed in previous season	Same level as <i>al-bāq</i> and <i>riy al-sharāqī</i>	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-barsh al-naqā'</i>	Different Crop from Previous Season	Varieties of Crops	Irrigated year-round and could support multiple growing seasons unlike <i>al-bāq</i>	Considered similar to <i>al-bāq</i> but could provide for two growing seasons	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-wasakh al-muzdara'</i>	Weeds Alfalfa	Weeds Alfalfa	Cultivation resulted in crops mixed with weeds	Not known	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-wasakh al-ghālib</i>	Weeds Alfalfa	Weeds Alfalfa	No Cultivation; land was used to pasture animals	Not known	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-khirs</i>	Weeds Reeds	Weeds Reeds	No cultivation possible; land could not be reclaimed; land was used to pasture animals	Not known	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-sharāqī</i>	No cultivation	No cultivation	Land that water could not reach for irrigation	Not known	<i>Ṣubḥ</i> 3:451 <i>Khiṭaṭ</i> 1:100
<i>al-mustabḥar</i>	No cultivation	Cultivation possibly occurred	Land which was flooded with water that thereafter failed to recede	Not known	<i>Ṣubḥ</i> 3:452 <i>Khiṭaṭ</i> 1:100
<i>al-sibākh</i>	Asparagus (<i>hilyawn</i>) Eggplant (<i>bādhinjān</i>)	Asparagus (<i>hilyawn</i>) Eggplant (<i>bādhinjān</i>)	Land had extremely high levels of salt; cultivation of grains was not possible; land occasionally transported to fertilize land for flax growth	Lowest value of land	<i>Ṣubḥ</i> 3:452 <i>Khiṭaṭ</i> 1:101

TABLE 3: AL-MAKHZŪMĪ'S LAND CLASSIFICATIONS *

Soil Type	Crop of Current Season	Crop of Previous Season	Irrigation or Other Notes	Source
<i>al-barsh</i>	Flax (<i>kitān</i>)	Gourds (<i>maqātī</i>) Sesame Cotton	Sometimes untilled in previous season	<i>Kitāb al-Minhāj</i> , 1,3-4.
<i>al-bāq</i>	Wheat Other crops	Legumes (<i>qaṭṭānī</i>)	Best land after <i>al-barsh</i>	<i>Kitāb al-Minhāj</i> , 1-2,4, 58-59.
<i>riy al-sharāqī</i>	Any crop	Not known	No irrigation in previous season	<i>Kitāb al-Minhāj</i> , 1-2, 58-60.
<i>al-shatūniya</i>	Any crop	Land left fallow	Irrigated in the previous season, but left fallow	<i>Kitāb al-Minhāj</i> , 1-2, 58-60.
<i>shiqq shams</i>	Any crop	Land left untilled	Land was <i>al-shatūniya</i> in previous season, but was ploughed and left to fallow	<i>Kitāb al-Minhāj</i> , 1.
<i>al-barūbiya</i>	Alfalfa Legumes	Wheat (<i>qamḥ</i>) Barley	Land was weakened by the crops of the previous season	<i>Kitāb al-Minhāj</i> , 1-2, 58-59.
<i>al-buqmāha</i>	Land left fallow	Flax	Land is used for flax, and is categorized by alternating between fallow and flax growing	<i>Kitāb al-Minhāj</i> , 1-3, 58-59.
<i>al-wasakh al-muzdara'</i>	Weeds Some other crops	Not known	Land is weedy but able to be cultivated. Crops are mixed with weeds.	<i>Kitāb al-Minhāj</i> , 59.
<i>al-wasakh al-ghālib</i>	Weeds Grasses	None	Land used for pasturing animals	<i>Kitāb al-Minhāj</i> , 58-60.
<i>al-sharāqī</i>	Not known	None	Unirrigated, can be watered using manual irrigation	<i>Kitāb al-Minhāj</i> , 1-2, 58-60.

Based off "Table 2: Land Categories According to Al-Makhzūmī," in Frantz-Murphy, Gladys, *The Agrarian Administration of Egypt from the Arabs to the Ottomans*, Supplément aux Annales Islamologiques, Cahier N° 9, (Cairo: Institut Français d'Archéologie Orientale, 1986): 82.

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