

1. The *muqtā'* was responsible for digging canals, building dams, and maintaining both. He relied on peasants for most of these activities but could use corvée labor and his own soldiers when needed. By and large he did not reside on his *iqṭā'āt*; he generally relied on his own agents (*wakīls*) to estimate local taxes and collect them on his behalf.⁵² Because the *iqṭā'āt* were fractured, one *muqtā'* could hire as many as four or five *wakīls* for these purposes.⁵³

2. *Muqtā'*s rarely interfered in the internal operations of the planting and harvests. It was the *fallāḥūn* themselves who decided what to plant, on what schedule to rotate crops, and how to share water. In other words, local custom generally prevailed in matters of cropping, harvest, and processing. One notable exception is sugar production, which was more closely monitored by the *muqtā'*, who in Jordan tended to be the sultan himself. On "sugar estates" the cropping of the sugar plant took precedence over other crops and customary water sharing agreements, interrupting crop rotation and the planting of summer crops.⁵⁴

3. Taxes on grains (*kharāj al-zirā'ah*) were generally paid in kind in Egypt.⁵⁵ The presence of grain storage facilities throughout Jordan by the fourteenth century suggests that grain was stored on the *iqṭā'āt* that produced the grain and at transport depots on main roads. Grain surplus could be used for times of need, which was often exploited by the state through forced purchases (*ṭarḥ*), or to provide provisions for agricultural laborers who supplemented the labor on sugar estates.⁵⁶

While Jordanian agriculture was broad-based and produced a variety of grains, fruits, and vegetables for the region, the staple here, as in Egypt, was wheat. Wheat is a winter crop that requires adequate rainfall during the growing season (200–300 centimeters per year in Jordan) and dry storage. It is grown in all of the country, but the largest fields are on the open plains of central and southern Jordan. Because Jordan's *wādīs* run with water only seasonally and are not generally navigable, local farmers had no major river, like the Nile, on which to rely for transport of grains to major storage facilities. Therefore, much transport from threshing floors to granaries (*shuwan*) must have been done overland, on the extensive road system developed in the early Mamluk period. The granaries took two forms: formally built *shūnahs*, which is a common enough place name in the Jordan Valley, and reused cisterns, which are ubiquitous in the country's soft

⁵²Sugar tax is one notable exception: *muqtā'*s, who were generally the sultans themselves, often personally supervised the collection of tax on sugar.

⁵³Hassanein Rabie, *The Financial System of Egypt: A.H. 564–741/A.D. 1169–1341* (London, 1972), 65.

⁵⁴Sato, *State and Rural Society*, 212 and 233.

⁵⁵Rabie, *Financial System*, 74–76.

⁵⁶Sato, *State and Rural Society*, 201.

limestone beds and can preserve grains for up to two years.⁵⁷ Both facilities required regular maintenance through cleaning and plastering. Because of Jordan's special hydrological conditions and infrastructure, its grain industry was highly vulnerable to drought and the security of the road system. As for cropping patterns, the *fallāhūn* of Jordan traditionally practiced a two-crop rotation on most cultivated land, including the Jordan Valley. Land tenure, where there was private ownership, has historically been communal, with a division of revenues among villagers after the harvest according to shares, known today as *mushā'* and very similar to the pattern of shares adopted by the *muqtā'*s.⁵⁸

Given these factors, but in the unfortunate absence of written sources for verification, one can cautiously propose that the *rawk* of 713/1313 impacted Jordanian agriculture in multiple ways. To begin with, the fragmentation of *iqṭā'āt* may have produced a more complex system of tax collection and transportation, particularly of grains, under the supervision of the agents of multiple *muqtā'*s. It is not clear at this point whether there was any coordination of efforts on the part of these agents or if tax revenues (in kind or in cash) were simply divided by the *muqtā'*s shares of the revenues after the harvest or sale and conversion of crops to currency. Regardless, the multiplication of *muqtā'*s meant heavier traffic on the road system and made more vital than ever the security of these transportation corridors for the purposes of tax collection.

On a second note, the concentration of *iqṭā'āt* in the hands of the sultan led to the development of large estates based on the production of specialized cash crops, such as sugar cane and olive oil, for export markets. These "plantations" transformed traditional cropping, water sharing, and labor organization. The sugar plantations in the Jordan Valley and on the tributaries of the Jordan River best illustrate these patterns. Cane sugar production requires a soft, well-drained soil, high temperatures, extensive irrigation, and a large labor force.⁵⁹ In addition to

⁵⁷J. M. H. Kareem, *The Settlement Patterns in the Jordan Valley in the Mid- to Late Islamic Period* (Oxford, 2000), 10; Carol Palmer, "Following the Plow': the Agricultural Environment of Northern Jordan," *Levant* 30 (1998): 155.

⁵⁸Communal land ownership was the pattern in the nineteenth and twentieth centuries and is also suggested by early Ottoman tax registers. It remains to be documented with certainty that this was the traditional pattern in the Mamluk period, however. In her historical-anthropological analysis of late Ottoman *mushā'*, Carol Palmer suggests ways to identify communal land tenure in historical periods archaeologically (Carol Palmer, "Whose Land Is It Anyway? An Historical Examination of Land Tenure and Agriculture in Northern Jordan," in *The Prehistory of Food: Appetites for Change*, ed. Chris Gosden and Jon Hather (London, 1999), 300–2. The private ownership of land by individual families is documented for the Karak region (see note 34), but so far this pattern seems to be unique for Jordan as a whole.

⁵⁹Sato, *State and Rural Society*, 216; Kareem, *Settlement Patterns*, 13.



resident *fallāhūn*, seasonal, migrant workers assisted in some of the heaviest labor tasks associated with sugar processing, and there is some evidence for the use of slaves, as well.⁶⁰ The soil requirements, the long period of cultivation (ten months), and the labor intensive activities associated with pre-sowing land preparation and maintenance make it impossible to grow other summer crops, namely vegetables, that tend to bring in large revenues, or to maintain the traditional two-crop rotation.⁶¹ Moreover, growing sugar cane requires the diversion of irrigation water from other crops.⁶²

The concentration of land in the hands of a single *muqṭā'*, as in the case of the sultanic sugar estates, was certainly conducive to plantation-style production. What impact, however, the fragmentation of the largely grain-producing plains had on annual yields and tax revenues in general has yet to be determined. The nineteenth-century grain boom of Palestine and Transjordan would not have been possible without the development of large landed estates after the implementation of the Ottomans' 1858 Land Law. There was a significant shift at that time from subsistence farming and limited production for local markets to surplus production for export to Europe.⁶³ Ottoman tax registers, as well, indicate that large estates brought in more tax revenue for the state than family or village-owned farms, explaining their conversion to taxable units by Ottoman authorities. In the absence of a comparison of grain yields between the pre- and post-*rawk* periods, which is not yet possible, such patterns do suggest that fragmentation of grain lands is more expensive, in the end, to administer.

In summary, all of these developments required more from the *muqṭā'*s, in terms of maintenance of irrigation canals and storage facilities, than before al-Nāṣir Muḥammad's survey, diverted Jordanian agriculture from a diversified to a specialized and export regime, and was profit-driven. It altered labor organization, local market, and traditional cropping and water distribution practices. Such a transformation of the local regime was certainly profitable, as the Ottoman *defters* demonstrate; however, it required a strong state and demanded safe transport and storage. Security was a particular concern for grain production, which was concentrated on the open plains and was particularly susceptible to disruption during times of political unrest. As the linchpin of the Mamluk economy, problems in the grain sector had serious ramifications to the state's economy as a whole.

⁶⁰Sato, *State and Rural Society*, 185; Kareem, *Settlement Patterns*, 11.

⁶¹Sato, *State and Rural Society*, 217 and 220.

⁶²*Ibid.*, 212.

⁶³Linda Schilcher, "The Grain Economy of Late Ottoman Syria and the Issue of Large-Scale Commercialization," in *Landholding and Commercial Agriculture in the Middle East*, ed. Çağlar Keyder and Faruk Tabak (Albany, 1991), 173–95.



WAQFIYĀT AND LAND MANAGEMENT

The sultanic estates of Mamluk Jordan were, in part, the result of the gradual transformation of *iqṭā'āt* into *khāṣṣ*, or crown lands, by purchase from the Bayt al-Māl, as is verified in the original *waqf* documents. They were then endowed as *waqf* for charitable institutions, the majority of which were sultanic madrasah complexes in Cairo. The alienation of state land has been recently examined for fifteenth-century Egypt, where the process is documented with sales and purchase writs and deeds from the late Mamluk and early Ottoman period.⁶⁴ Petry has described the process as an investment strategy for later Mamluk sultans.⁶⁵ According to his estimates, some 1000 *waqfiyāt* of the pre-Ottoman period are extant in Cairo's archives, most of these are Mamluk in date, and 30% of these date to the reign of Sultan al-Ghawrī.⁶⁶ Most of the land in these endowments was acquired piecemeal, through shares of rural land or villages, the kind of fragmentation produced by al-Nāṣir Muḥammad's cadastral surveys.⁶⁷ In the case of al-Ghawrī's endowments, Petry has demonstrated that revenues from rural estates far exceeded the expenses required to maintain the endowment proper, in some cases resulting in a 90% surplus, a large revenue not accounted for by any documented expenditure.⁶⁸ Petry suggests in his studies that these were, thus, a form of "clandestine investment" that, on one hand, resulted in the erosion of the *iqṭā'* system, but on the other created significant asset-building in the form of private property.⁶⁹

Abū Ghāzī's recent monograph on land tenure in late Mamluk Egypt has received much attention for its statistical analysis of the same phenomenon.⁷⁰ His data largely supports the conclusions of Petry in the 1990s: 1) 95.79% of all documented land sales from the Bayt al-Māl in the pre-Ottoman period date to the Burjī Mamluk period;⁷¹ 2) most of these purchases were of former *iqṭā'āt*;⁷² and 3) the majority of these purchases took place during the reigns of Īnāl, Khushqadam,

⁶⁴Carl F. Petry, *Protectors or Praetorians? The Last Mamluk Sultans and Egypt's Waning as a Great Power* (Albany, 1994), 196–210; idem, "Waqf as an Instrument of Investment in the Mamluk Sultanate: Security vs. Profit?" in *Slave Elites in the Middle East and Africa: A Comparative Study*, ed. Miura Toru and John Edward Philips (New York, 2000), 99–115; 'Imād Badr al-Dīn Abū Ghāzī, *Taṭawwur al-Ḥiyāzah al-Zirā'iyah fī Miṣr Zaman al-Mamālīk al-Jarākisah* (Cairo, 2000).

⁶⁵Petry, "Waqf as an Instrument."

⁶⁶Ibid.

⁶⁷Ibid., 103.

⁶⁸Ibid., 104.

⁶⁹Petry, *Protectors or Praetorians?* 210.

⁷⁰Abū Ghāzī, *Taṭawwur al-Ḥiyāzah*.

⁷¹Ibid., 16.

⁷²Ibid., 18.



Qāyṭbāy, and al-Ghawrī (the highest at 64.5%).⁷³ He further suggests that by the time of the Ottoman conquest one half of former state land was now in private hands;⁷⁴ that the Bayt al-Māl was, for all intents and purposes, empty;⁷⁵ and that some 88.89% of Egypt's agricultural land was tied up in *waqf*.⁷⁶ Of the three social groups that purchased state lands (the Mamluk elite, amirs' families and retainers, and Egyptian civilians), the largest land owners were the Mamluk elite (sultans and amirs), at 43.1% of all documented purchases from the Bayt al-Māl.⁷⁷ Abū Ghāzī states, furthermore, that in some cases entire villages were, indeed, purchased as complete units,⁷⁸ an observation that would not have been possible without reading the available Ottoman land sales files.

Abū Ghāzī's conclusions are justifiably conservative: that we cannot know for certain what the real objectives were for this rush to purchase and endow former state lands at the end of the Mamluk period. He dismisses the point of view of Arab contemporaries, who cite financial and security (that is military) crises for which liquidation of public lands was necessary. Certainly, the process led to the creation, for better or worse, of newly-propertied classes, who now could dispose of land as they saw fit. This is, of course, another way of describing social transformations that cannot be said to be purely "decline" or "development." Perhaps the most intriguing of his conclusions was that by broadening the base of private ownership, the agricultural base of the Mamluk economy could be revived.⁷⁹ By his own admission, the author has no evidence for such a claim, but offers it only as a final thought in his study.

As for Jordan, the same process occurred here, but there were some important differences. The largest documented sultanic endowments date to the reign of Barqūq and were concentrated in the Jordan Valley and the Sawād of the northern hill country (some of the richest farmland in the region); the earliest recorded endowments consisted of entire villages, not merely shares. The documented examples are few:

1. Sultan Baybars—two shares of the village Bayt Rāmah in the Jordan Valley, for his madrasah complex in Cairo, no date given.⁸⁰
2. Sultan Sha'bān—the village of 'Adar near Karak, in its entirety, for an

⁷³Ibid., 28.

⁷⁴Ibid., 105.

⁷⁵Ibid., 83.

⁷⁶Ibid., 66.

⁷⁷Ibid., 110.

⁷⁸Ibid., 104.

⁷⁹Ibid., 125.

⁸⁰Al-Bakhīt and Ḥammūd, *Tapu Defteri No. 185*, 32.



unnamed recipient, in 777/1375.⁸¹

3. Sultan Barqūq—the Jordan Valley villages of Nimrīn, Kafrīn, and Zarā‘ah, in their entirety, for his madrasah-mausoleum complex in Cairo, no date given;⁸² the village of Malkā in the Sawād, in its entirety, for the same complex, in 796/1393.⁸³

4. Sultan Khushqadam—three shares each of the Sawād villages of Marw and Harhār, for his madrasah complex in Cairo, no date given;⁸⁴ twelve shares of an unnamed *mazrā‘ah* (isolated farm) in the Jordan Valley for the same complex, no date given.⁸⁵

The lands described are located in the most fertile regions of Jordan and fall into three categories: grain fields of the plains, sugar plantations of the Jordan Valley, and the orchards of the Sawād (which produced high quality olive oil, as they do today). Wheat, sugar, and olive oil—these were the staples of the average man’s diet in this period, and were, thus, excellent commodities to control by enterprising entrepreneurs. The revenues collected from these estates, which remained intact through the sixteenth century, are recorded in the Ottoman *defters*. However, to give an idea about the scale of production and the possible revenues to the *mawqūf* at the time of endowment, I will rely on recent archaeological data that continues to supplement the archival work for this study.

CASE STUDY: FINANCIAL RETURNS FROM ḤISBĀN SUGAR AND MALKĀ OLIVE OIL

Ḥisbān was an administrative center, and there is no evidence that any of its land was made *waqf* during the Mamluk period. However, its role in the transport and redistribution of processed cane sugar has been documented by recent archaeological investigations, which also indicate the scale of the sugar produced in the region. During the 1998, 2001, and 2004 field seasons, the southern end of a domestic complex, identified as the residence of the *wālī al-Balqā’*, was excavated.⁸⁶ A long and narrow, barrel-vaulted storeroom, approximately 8 meters long and 2 meters wide, defined this space. On the basis of pottery and coins recovered from floor levels, it has been dated to the fourteenth century. The storeroom was full of mendable ceramic vessels, including sugar jars, which were hour-glass in shape

⁸¹Ghawānimah, *Tārīkh Sharqī al-Urdun*, 243–44; idem, “Al-Qaryah fī Janūb al-Shām.”

⁸²İpşirli and al-Tamīmī, *Awqāf wa-Amlāk*, 94; al-Bakhīt and Ḥammūd, *Tapu Defteri No. 185*, 32.

⁸³Waqfīyah 9/51, Dār al-Wathā’iq, Cairo; Walker, “The Northern Jordan Survey”; idem, “Mamluk Investment in the Transjordan,” 130.

⁸⁴Al-Bakhīt, *Nāhiyat Banī Kinānah*, 38 and 45.

⁸⁵Al-Bakhīt and Ḥammūd, *Tapu Defteri No. 185*, 32.

⁸⁶Walker, “Late Ottoman Cemetery”; idem, “Mamluk Administration of Transjordan”; Walker and LaBianca, “The Islamic *Quşūr*”; Walker, “Tall Ḥisbān, 2004.”



and built for overland transport. The sugar jars were originally placed directly on the floor, along both sides of the room, while other vessels were stored on wooden shelves along the walls. The destruction of this complex by earthquake and fire in mid-century preserved much of its contents.

A rough estimate of the carrying capacity of this storeroom is 94 store jars, each holding some 6750 cubic cm of raw sugar. Using modern calculations for the density of processed cane sugar, the weight of the contents of each jar would have been 6.075 kg, or a total of 571 kg for all the jars in storeroom, if filled to capacity. To determine the market value of the sugar stored here in fourteenth-century currency, I adopt the price scheme developed by Ashtor, which he bases on Italian price lists recorded by weight of product in Damascus *qintārs*.⁸⁷ The Ḥisbān storeroom would, thus, at full capacity have held some 3.1 *qanāḥīr* of processed cane sugar, which, if the end product was raw sugar, would have been worth 3875 dirhams or 194 dinars by the third quarter of the fourteenth century.⁸⁸ While this seems a modest amount, it alone would have contributed 10% of a cargo of sugar carried on a Venetian galley in the fourteenth century.⁸⁹

Archaeological surveys in the *wādīs* surrounding Tall Ḥisbān have identified many water mills, but their date and function are still uncertain. If the sugar stored at Ḥisbān was not a local product (and this has still not been established), it may have been transported there from the Jordan Valley, 15 kilometers to the west, where there is written and archaeological evidence for extensive sugar production at this time. Ḥisbān, like other administrative centers in Palestine and Transjordan, served double-duty as a storage and transport depot for agricultural products en route to regional markets and ports. In short, if the Ḥisbān sugar was grown and processed locally, it was en route to Mediterranean ports for export to Europe; if a product of the Jordan Valley, it may have been on its way to Egypt or local markets.

Malkā is today one of the largest and most prosperous villages in northern

⁸⁷Eliyahu Ashtor, "Levantine Sugar Industry in the Later Middle Ages—An Example of Technological Decline," *Israel Oriental Studies* 7 (1977): 252. Considerations of vacillating exchange rates of the dinar and its relation to the dirham, while currently debated in Mamluk scholarship, are well beyond the scope of this article. Prices are presented merely to suggest scale of production.

⁸⁸The carrying capacity of the storeroom is based on my own field notes and a published floor plan (Walker and LaBianca, "The Islamic *Quṣūr*," Fig. 5) and my own ceramic profile drawings and one published photo (Walker, "Mamluk Investment in Southern Bilād al-Shām," 255, Fig. 3). Price estimates are based on Ashtor, "Levantine Sugar Industry," 252, Table 252 (price entry for Nov. 1379 C.E.) and Sato, *State and Rural Society*, 243. I have relied on an internet source for current calculations on the density of processed sugar, which is 900 kg per each cubic meter: www.sugartech.co.za/density/index.php.

⁸⁹Ashtor, "Levantine Sugar Industry," 236.



Jordan, known for its high-quality olive oil. It must have given the Mamluk state considerable income, as well, in the late fourteenth century, because, as we have already discussed, Sultan Barqūq endowed the entire village, among other rural and urban properties in Egypt and Syria, in financial support of his madrasah complex on the Bayn al-Qaşrayn. According to the original *waqfiyah*, now housed at the Dār al-Wathā'iq in Cairo, olive orchards and presses (*ma'āşīr*) are listed as important parts of the estate.⁹⁰

An archaeological survey in 2003 revealed evidence of the olive oil industry that is described in this document. It is possible to cautiously estimate production of this single factory, while keeping in mind that other presses were in operation at the same time, elsewhere in the medieval village. The group of presses surveyed was located in a cave (Cave 12) that had been used for olive oil production since the Byzantine period. It contained a half dozen shafts cut into the natural cave walls to hold press arms, as well as two ceiling holes for screw-and-weight presses. In addition, the remnants of a basalt grinding stone were left in the cave interior. According to calculations made for similar weighted lever plants at Hellenistic Maresha, and assuming that all six presses were in use in this period and operating simultaneously, six hectares of olive groves would have supported this single plant at Malkā and could have produced 13,000–27,000 liters of olive oil annually. Of this amount, over 10,000 liters were surplus, exceeding the needs of local consumption, and were thus available for sale in local markets or export.⁹¹

As for the value of such surplus in fourteenth-century currency, we once again rely on Ashtor. Today a liter of olive oil weighs 9/10 of a kilogram; the 10,000 liters surplus from this single plant at Malkā would have weighed a total of 9000

⁹⁰Waqfiyah 51/9, Dār al-Wathā'iq, Cairo.

⁹¹Nahum Sagiv and Amos Kloner, "Maresha Underground Olive Oil Production in the Hellenistic Period," in *Olive Oil in Antiquity: Israel and Neighbouring Countries from the Neolithic to the Early Arab Period*, ed. D. Eitam and M. Heltzer (Padova, 1996), 276–77. This is based on a conservative population estimate of 150 people, arrived at by using figures from an Ottoman land register (*Tapu Tahrir Defterleri*) of 1596–97. The census records 27 families (*khāneh*) and 15 bachelors (*mufrad*) (al-Bakhīt, *Nāhiyat Banī Kinānah*, 22, Table I). A peasant family, for the purposes of Ottoman tax registers, consisted of a nuclear family (mother, father, and children) (Halil Inalcik, *The Ottoman Empire: The Classical Age 1300–1600* [London, 1994, reprint], 144). Our modest estimate is deliberately low at a five-member household. (Such numbers should be used with caution, however. For criticisms of calculating population size on the basis of Ottoman tax surveys, see Bekir Kemal Ataman, "Ottoman Demographic History (14th–17th Centuries): Some Considerations," *Journal of the Economic and Social History of the Orient* 35 (1992): 187–98, and Heath W. Lowry, "The Ottoman *Tahrir Defterleri* as a Source for Social and Economic History: Pitfalls and Limitations," in idem, *Studies in Defterology: Ottoman Society in the Fifteenth and Sixteenth Centuries* (Istanbul, 1992), 3–18.



kg, which was the equivalent of 482 Syrian *qinṭārs*.⁹² Ashtor, citing Ibn Kathīr, records an export price in the year 1347 of 4.5 dirhams per Damascus *raṭl* of oil, which was 9 dinars per Syrian *qinṭār*.⁹³ In the mid-fourteenth century, then, this plant could have produced a profit of 440 dinars annually. This is, of course, assuming the same end product, which was soap. If the oil was of a higher quality and sold as table oil, it would have been worth considerably more. Regardless, this was no negligible profit: it would have represented, for example, over 30% of the cost of a shipment of 2790 jars of Spanish olive oil to Alexandria in 1405.⁹⁴

Clearly, profit could be made from such specialized production, even when the scale of production at a single site was modest. But was profit the primary rationale for land purchases from the Bayt al-Māl, as we presume these to be, and for their subsequent endowment during the late fourteenth and throughout the fifteenth centuries? Contemporaries commented on and lamented the abuses of rural land by Mamluk amirs but, apparently, had nothing to say about the alienation of state lands in Jordan. Nonetheless, the Ottoman tax registers describe the development of these estates in the sixteenth century and are rather instructive about the financial longevity of the endowments. I will summarize the contents of these registers as regards the villages described above:

1. ‘Adar—The village was no longer settled on a permanent basis by 945/1538 and had devolved into a *mazrā‘ah* (isolated farm), administered, and perhaps cultivated, by Karak town.⁹⁵ ‘Adar produced an annual revenue of 100 *akches*,⁹⁶ which belonged to the sultan’s *khāṣṣ*.⁹⁷ Barqūq’s endowment had, apparently, been dissolved.

2. Nimrīn—In the years following the Ottoman invasion this village had dwindled in size but rebounded by the close of the century. In 945/1538 it was a very small village of five households that controlled only 5 feddans of cultivated land, which produced wheat, barley, sorghum, cotton, and sesame,⁹⁸ sugar cane

⁹²My estimates for modern weight and volume calculations were retrieved on-line at: www.olivebusiness.com/oliveHandbook/GrowingOlives/olive_balance_sheet.htm.

⁹³Eliyahu Ashtor, *Histoire des prix et des salaires dans l’orient médiéval* (Paris, 1969), 407.

⁹⁴Notarial records in the Vatican record a shipment of olive oil from Seville to Alexandria in 1405, when the Mamluk state was now importing large quantities of oil from Europe; the shipment was worth 1400 dinars at the time (Eliyahu Ashtor, *Levant Trade in the Later Middle Ages* [Princeton, 1983], 214). While there is a fifty-year difference between this shipment and the price estimate used above, and we are not certain from the data provided about the quality of the oils and how they compare, the comparison in profits is, nonetheless, informative for the scale.

⁹⁵Al-Bakhī and Ḥammūd, *Tapu Defteri No. 970*, 152.

⁹⁶Al-Bakhī and Ḥammūd, *Tapu Defteri No. 185*, 75.

⁹⁷*Ibid.*, 306.

⁹⁸Al-Bakhī and Ḥammūd, *Tapu Defteri 970*, 102.



was not grown any more. The tax registers make reference to Barqūq's original endowment but suggest that part of the revenues from this village once earmarked for his madrasah in Cairo were now being used, along with the villages of Kafrīn and Zarā'ah, to support the Mūsá shrine (arguably a local shrine in Wādī Mūsá). Annual taxable revenues totaled 3659 *akches*. By 1005/1596 there were six households, still small for a village of the time in the Jordan Valley, controlling 20 feddans of cultivated land. Annual revenues from this land came to 3470 *akches*.⁹⁹ Of this, 695 *achkes* were set aside for the Mūsá *zāwiyah* and 2756 *akches* for Barqūq's Cairo complex; the 'ushr tax on both of these endowments belonged to the sultan as his private fisc (*khāṣṣ*).¹⁰⁰

3. Kafrīn—The fate of Kafrīn mirrored that of nearby Nimrīn. In 945/1538 the village had an imam and consisted of 37 households, which cultivated 10 feddans of land. Taxable crops included wheat, barley, sorghum, cotton, and sesame and brought 6900 *akches* in taxable revenues a year, which were divided among two endowments (those of Nabī Mūsá *zāwiyah* and Barqūq's Cairo complex) and the sultan's *khāṣṣ*. According to the register for 1005/1596 the population had grown to 43 households (the largest in the Jordan Valley at the time) and cultivated land had doubled, producing some of the highest yields in the province.¹⁰¹ Both endowments were retained, that of Barqūq receiving 12665 *akches*/year (17921/year with Nimrīn and Zarā'ah combined) and Mūsá shrine a modest 665 *akches*/year.¹⁰² As with the Nimrīn, there is no mention of sugar production in the register entries.

4. Zarā'ah—Likewise, in 945/1538 Zarā'ah constituted 11 households, one imam, and cultivated 10 feddans, which produced some 7150 *akches* in annual revenue.¹⁰³ It produced the same crops as Nimrīn and Kafrīn. At this point, however, it seems that the village was separated from Barqūq's original estate and specifically earmarked as a *timār* for one Maḥmūd Jawūsh.¹⁰⁴ By 1005/1596 the population grew to 17 households that controlled less land (6 feddans), shared water from Wādī Zarqā, and paid taxes on presses (*ma'āṣir*), presumably olive presses.

5. Malkā—This village experienced notable growth throughout the sixteenth century. By mid-century it had its own mosque, and by 1005/1596–97 its population had doubled.¹⁰⁵ Its annual revenues in summer crops and olives were among the

⁹⁹ Al-Bakhīt and Ḥammūd, *Tapu Defteri No. 185*, 43.

¹⁰⁰ *Ibid.*, 125.

¹⁰¹ *Ibid.*, 25 and 43.

¹⁰² *Ibid.*, 126.

¹⁰³ Al-Bakhīt and Ḥammūd, *Tapu Defteri No. 970*, 112.

¹⁰⁴ *Ibid.*

¹⁰⁵ Hütteroth and Abdulfattah, *Historical Geography*, 202.



erosion), in combination with archival research (primarily *waqfiyāt*) and archaeological survey and excavation, to identify changes in crops grown and climatic conditions and their relationship, if any, with the political circumstances of the day.¹²³ Preliminary results of these seasons suggest that the combined effect of drought and political instability damaged the agricultural sector in the geographically exposed lowlands and plateaus and that demographic decline was far from universal for the region.

CONCLUSIONS—DECLINE OR TRANSFORMATION?

“Decline” is in the eye of the beholder. From the vantage point of Jordan, what characterizes the fifteenth century is not urban violence, high taxes on industry, changing trade routes, and confiscation of property—the conditions traditionally cited for Egypt—but climatic and political conditions that made it difficult to farm and to maintain traditional village life. Drought and civil unrest, caused by the amiral conflicts in Karak, seem to have the greatest negative impact on village life and the economy in general in southern Bilād al-Shām. The endowment of the most productive estates in the region during this period may have staved off the worst consequences of both, by allowing for centralized control (and a consistent land management policy), creating security (political, military, and economic), and providing a venue for financial investment in the region (in irrigation canals and dams, roads, storage facilities, etc.) While such endowments did rob the Bayt al-Māl of important tax revenues, it also funneled them into what may have been more effective financial channels. That these were successful enterprises is indicated by their administration in the early Ottoman period: it was more lucrative for the Ottoman state to keep these estates intact than to break them into much smaller *timārs* or *zi‘āmet*s. While the evidence is thus far meager, what sources we do have at our disposal suggest that the process of creating rural *awqāf* from former state lands may have been a form of land development, sponsored by the state to respond to and recover from agricultural crises, such as drought, famines, and plague. Seen in this light, the fifteenth century was more a period of rural transformations than decline of the state.

¹²³Lucke et al., “Soils and Land Use.”

