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You Reap What You Sow:
The Importance of Agriculture to the
Islamic State's Governance Strategy

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Abstract

Between 2014 and its subsequent territorial collapse, the Islamic State created an intricate bureaucratic system that sought to touch on and govern all aspects of the lives of those that lived under its control. This paper addresses one of the most understudied departments operated by the Islamic State in its “state-building” project, the Department of Agriculture. This paper reveals a complex system of governance, designed to maximize the Islamic State’s income and use an extensive bureaucracy to control land, food, populations, and the economy. Furthermore, as the evidence in this paper suggests, the Islamic State used its governance to demonstrate a real-world manifestation of its Salafi-Jihadi ideology.

Introduction

The June 2014 conquest of Mosul and the ensuing declaration of a caliphate by the newly christened Islamic State was the culmination of the group's state-building project, dating back to October 2006.¹ Between 2014 and its subsequent territorial collapse in 2018, ending with the March 2019 recapture of Baghouz, the Islamic State created an intricate bureaucratic system that sought to touch on and govern all aspects of the lives of those that lived under its control. To date, extensive attention has been paid to the Islamic State's military actions, terrorist tactics, and revival of slavery, highlighting the group's depravity. However, less is known about the group's day-to-day governance activities. The George Washington University's ISIS Files digital repository helps to fill this gap by providing a glimpse into the inner workings of the Islamic State bureaucracy.

This paper addresses one of the most understudied departments operated by the Islamic State, *Diwan al-Zira'a wa al-Tharwa al-Haywaniya*, the Department of Agriculture and Livestock, or often shortened to just Diwan al-Zira'a (Department of Agriculture). Making up the largest tranche of the ISIS Files digital repository, almost 550 documents in the George Washington University's collection touch on the Islamic State's governance of agriculture in Wilayat Ninawa, Ninawa Province, between 2014 and 2017. According to the Islamic State's al-Furqan Media, in a video released in 2016, which outlined the responsibilities of fourteen Islamic State departments, the Department of Agriculture was "responsible for agricultural and animal resources," as well as "maintaining food security for Islamic State residents."² This department was a vital part of the Islamic State's governance strategy.

The Islamic State's regulation of agriculture allowed the group to demonstrate its control over local populations in multiple ways. Agriculture proved to be a lucrative financial venture that allowed the group to claim to provide food security, and thus a victory, by taking over a seemingly functioning system that was already in place. The ISIS Files indicate that controlling agriculture in Ninawa, the economic center of the caliphate, was key to securing the group's finances. Moreover, the control of both land and food allowed the Islamic State to further regulate local

populations. For example, renting out land, adjudicating land disputes, as well as influencing market prices and production. The administration of the Department of Agriculture allowed the Islamic State to control land, food, populations, and the economy.

Furthermore, as the files discussed in this paper will show, agriculture allowed the Islamic State to demonstrate through its actions a real-world manifestation of its Salafi-Jihadi ideology. Painting the world in black and white, the Islamic State used its control of land and food to further its “us” versus “them” dichotomy, taking away land from those in the out-group, and ensuring it was given to those that it deemed to be supporters.³ By tying its ideology to its governance, the Islamic State ensured that even if local populations did not believe in its dogma, they were forced to participate in its system of control.

Previous research and reports have only touched on how the Islamic State’s control of agricultural lands has impacted the group’s finances and governance. The ISIS Files reveal an extensive bureaucracy in the Department of Agriculture which will be elaborated on in this paper. First, this paper will discuss the existing research, before presenting the methodology of this study. The paper is divided into two parts. Part I provides background on the Islamic State Department of Agriculture based on external primary sources, including propaganda and administrative documents. Part II uses the unique collection of the ISIS Files digital repository to explore the Islamic State’s governance of land and people through agriculture. We break Part II into two sections. The first section explores the group’s control over local populations through land confiscation, internal controls, land rental agreements, harvest monitoring, rent collection, and dispute resolution. The second section discusses the functioning of the agricultural economy, including the Islamic State’s use of auctions, exports and imports, direct price controls, and responses to monopolies. Finally, this paper seeks to offer concrete findings on the Islamic State’s governance of agriculture and its resulting implications.

A Review of the Existing Literature

While much has been written on the Islamic State's fundraising capabilities, very little attention has been paid to the role controlling the agricultural industry played in maintaining and expanding the Islamic State's state-building project and spreading its ideology. As explored by authors such as Mampilly,⁴ Martínez and Eng,⁵ Arjona, Kasfir, and Mampilly,⁶ as well as Asal, Flaniganban, and Szekely,⁷ among others, some rebel governors and insurgent groups provide services to local populations in order to engender support and consolidate power.

In general, efforts by rebel groups to control and engage in agriculture are not uncommon. For instance, a study by Suykens on rebel groups in India shows that the rebel Maoist group Communist Party of India invested in agriculture by organizing irrigation and collective farming methods.⁸ When specifically looking at the Islamic State, in a study on the politics of bread in the Syrian civil war, Martínez and Eng argue that “[w]hile observers attribute much of the Islamic State's meteoric rise to its string of military victories and clever social media tactics, the organization's efforts to provide bread, security, and other basic services were crucial to its initial expansion in Syria.”⁹ Focusing on governance, Martínez and Eng looked to the provision of services to local populations as a means of gaining support.

The Islamic State's first step in exerting control over the agricultural industry was taking control of farmlands and connected industries. Documents obtained by the researcher Aymenn Jawad Al-Tamimi illustrate an apparent draft budget and appear to show that the confiscation of land and property was a major source of income for the Islamic State in some areas. For example, in a month-long period between 23 December 2014 - 22 January 2015 in much of Deir az-Zor province in eastern Syria (named “Wilayat al-Khayr” by the Islamic State), confiscation accounted for 44.7% of the income for the provincial treasury. In comparison, oil and gas, often touted as the group's greatest source of income, accounted for 27.7% of the income for the provincial treasury.¹⁰ The Islamic State's confiscation policy included land, farms, houses, and belongings of people who fled and or were part of the out-group, as well as goods prohibited by the Islamic State such as cigarettes and alcohol.

In terms of its contribution to GDP, agriculture's role in Iraq's economy is relatively small (estimated in 2019 at 3.3%), yet many Iraqis depend on it.¹¹ At the time of the Islamic State's occupation of large parts of Iraq in 2014, one-third of the country's inhabitants depended on agriculture for their livelihood.¹² Ninawa, where the ISIS Files originated, has historically been considered "the breadbasket of Iraq" because of high levels of precipitation and a climate favorable to agriculture. Together with Salahadin Governorate, it typically produced one-third of Iraq's annual wheat and barley, mostly on rain-fed lands.¹³

At the peak of its power, the Islamic State controlled 60% of the croplands in Ninawa and 75% in Kirkuk, most of which are rainfed.¹⁴ In a geographic information system study and remote sensing analysis conducted by Jafaar and Woertz, the authors found that the Islamic State had sustained agricultural production in both Iraq and Syria.¹⁵ According to their analysis, winter crop production in 2014 and 2015 in Islamic State-controlled areas was 52% above the decadal average, and Ninawa, where the ISIS Files were found, was the most "productive" province. Jafaar and Woertz attribute this in part to improved rainfall in 2015, and hold that agriculture was a crucial source of income for the Islamic State that added to its resilience. The ISIS Files we examine below further elucidate and confirm the contribution of agriculture to the economy of the caliphate.

As explored above, very little academic research has touched on the Islamic State's control of agriculture. The research has often focused on the group's use of agriculture as a source of financial revenue, or as a means of engendering support for local populations. However, while these studies examine the use of agriculture to control governance, they often ignore the role agriculture plays in helping to implement and spread the Islamic State's ideology.

A Methodological Look at Agriculture-Related Documents Included in the ISIS Files

This paper proceeds in two parts, using two unique sets of data. Part I of this study provides background on the Islamic State's Department of Agriculture, both before and after the group's declaration of its so-called caliphate. This section of the paper specifically focuses on external primary source documents, not held as part of the George Washington University's ISIS Files digital repository. The documents reviewed in Part I come from a variety of sources, including Islamic State-produced propaganda, as well as external administrative documents, many archived by Aymenn Jawad al-Tamimi.¹⁶ Furthermore, these external documents relate to the group's attempts at governance in a variety of geographical locations across both Syria and Iraq. This section employs external primary source documents to better understand the Islamic State's general attempts at controlling agriculture both before and after 2014 and provides a context in which to understand the evidence in the ISIS Files.

Part II of this study uses the George Washington University's ISIS Files digital repository to explore the Islamic State's governance of land and people through agriculture in Ninawa province between 2014 and 2017. Prior research provides very few insights from this large and financially lucrative department, which was a backbone of not only the Islamic State's financial operations but also its governance and ideology. This paper seeks to use the ISIS Files to shed more light on the Islamic State's agrarian operations.

The George Washington University's ISIS Files digital repository consists of over 15,000 pages of primary source Islamic State documents collected around Ninawa province. A systematic review of the entire ISIS Files digital repository revealed that the largest collection of documents in the repository related to the Islamic State's agriculture activities, comprising approximately 550 records numbering almost 6,000 pages.

The authors of this study methodologically sorted these files, finding that the majority of these agriculture documents, almost 75%, are related to agreements in which the Islamic State leased confiscated land to local

farmers. Other documents include revenue sheets (6%), receipts (4%), harvest permits (2%), rental and sales contracts (2%), and other files including public announcements, inventory lists, and agricultural complaints.

Through an analysis of the approximately 550 agrarian-related ISIS Files, this paper pulls out key insights from the documents to elucidate how the Islamic State exercised control over the agriculture industry. Furthermore, this paper seeks to provide representative evidence on what is available in the ISIS Files digital repository related to agriculture. Where relevant, the documents are placed into context by discussing their connection to what is already known from prior research. It should be noted that this is not a summary of all available documents.

Part I: Background on the Department of Agriculture

As discussed above, many of the early studies looking at agriculture used a variety of primary and secondary sources to substantiate their claims. This section of the paper specifically explores some of the most important primary source documents produced by the Islamic State, both before and after the declaration of the caliphate. As noted in the methodology section, these external primary source documents, not held as part of the George Washington University's ISIS Files digital repository, come from a variety of sources, including Islamic State-produced propaganda, as well as external administrative documents. The following section will first discuss the Islamic State's attempts to control agriculture leading up to 2014, before focusing on the Islamic State's declaration of its so-called caliphate and the creation of the Department of Agriculture.

Before the Caliphate

Prior to the 2014 declaration of its caliphate, the Islamic State's predecessors made scattered attempts at governing civilians. Several primary source documents dated before the declaration of the caliphate showed that agriculture was controlled by different areas of the organization, with no clear oversight. For example, before 2014, the "Wheat and Bakeries Department" regulated the price of bread in Aleppo,¹⁷ while after the declaration of the caliphate such activities were more centrally regulated by the Department of Agriculture.¹⁸ Furthermore, the Islamic State's prioritization of agriculture was evident even in 2013, when the group negotiated a 48-hour cease-fire during a military standoff with the Assad Regime in Syria to allow farmers to harvest their crops.¹⁹

Even before the 2014 declaration of the caliphate, the governance of agriculture had been closely linked to the Islamic practice of *zakat*, or alms tax. The Islamic State, and its predecessors, sought to tie its ideology to its governance. Thus, much of the *zakat* collected by the Islamic State and its predecessors took the form of agricultural produce, which as discussed above, was a large source of income for local populations. Systems of control linking the Islamic State's ideology to its governance can be seen even in documents that pre-date the caliphate. For example, a

declaration issued by the General Shari'a Committee for Wilayat al-Baraka to owners of harvest vehicles, 'urged' harvest vehicle owners to cooperate with the Islamic State in the collection of *zakat* by helping to identify farmers and their crops.²⁰

Another way that the Islamic State sought to promote its governance and state-building was through its propaganda.²¹ For example, emphasizing the group's linking of its ideology to its governance strategy, one early propaganda article touched on the relationship between *zakat* and agriculture with a pre-caliphate article titled "Farmers reap the rewards of their harvest by giving Zakat."²² The Islamic State sought to use agriculture as a means of demonstrating its implementation of an Islamist ideology in practice. While the concept of giving *zakat* is not unique to the Islamic State,²³ the group's control of *zakat*, and encouragement of farmers to contribute to the system it controlled is important to recognize.

The Islamic State also used its pre-caliphate propaganda to demonstrate its early governance attempts. The group claimed credit for protecting farmers in Homs province from attacks by thieves and highway robbers,²⁴ and even took credit for a good harvest year, mentioning that they facilitated the harvest and "counseled harvest machine owners to be kind to land owners and not raise the prices for harvesting."²⁵ Although the wording seems inconspicuous, it will become clear from the evidence presented in this report that the Islamic State was not counseling but rather dictating to farmers how to do their jobs. Further, during this period, the Islamic State was taking credit for victories, even agricultural ones, that were not carried out under its watch.

This theme of portraying stable governance, even where one does not exist, continues throughout the propaganda. For example, one article displayed photos of markets filled to the brim with fresh fruits and vegetables, with the accompanying texts "Trade flourishes under the rule of the Islamic State," and "Fresh produce injects life into Halab Market."²⁶ Interestingly, the images and associated texts suggest that the Islamic State was stably governing Aleppo (Halab) Province in Syria, while in reality, the group controlled only parts of the northern and eastern Aleppo countryside at this time.²⁷

While only lightly touching on this pre-caliphate period, which in and of itself could be its own article, we want to highlight the Islamic State's early attempts to use both propaganda and bureaucracy to implement control over local populations. Although more scattered and less organized, these early attempts, with both successes and failures, have implications for the group's later strategies.

Creating the Department of Agriculture and Livestock

After the group gained unprecedented territorial control in 2014, it ramped up both its governance capabilities and its propaganda, much of which focused on its state-building proficiencies. With the declaration of the caliphate in 2014, the Islamic State created the Department of Agriculture (*Diwan al-Zira'a*). One of fourteen Islamic State departments noted in the group's propaganda, the Department of Agriculture was "responsible for agricultural and animal resources," as well as "maintaining food security for Islamic State residents."²⁸ The Islamic State touted its food security program in its propaganda, promoting video footage of farming, food storage, and the distribution of flour to bakeries in its provinces.²⁹

Despite being listed as an official department by the Islamic State and being mentioned in the group's propaganda, to date, no file detailing the structure of the Department of Agriculture has been made public. However, an examination of other Islamic State departments, as well as an exploration of Islamic State administration documents, provides some insights.

For example, in one external file released in May 2015, a notice by the Islamic State's general administration Wilayat al-Fallujah (Fallujah Province) discussed some of the administrative structures in the province, including a Department of Real Estate, a Department of Zakat, and a Department of Agriculture. The document then detailed that the Department of Agriculture in Fallujah was composed of an Emir, or chief, of the department, a deputy Emir of the department, an accounting official, and supplemental support staff.³⁰ While this document details the Department of Agriculture in just one province, it can be presumed that a comparable system was set up in other provinces as well.

The 2014 restructuring of the Islamic State’s administration can be seen as bringing agriculture and food, specifically grains and bread, under one roof. While before the caliphate the General Shari'a Committee in a specific area “urged” harvest vehicle owners to cooperate with the Islamic State, after the declaration of the caliphate, pronouncements were issued by the Department of Agriculture in cooperation with the Department of Zakat. For example, in Deir az-Zor Province, a notice was issued by the Zakat center requiring every owner of a combine to go to the local *zakat* office, register the machinery, and sign a pledge to use the machinery as dictated by the Islamic State harvest timetable.³¹ Such findings were confirmed by examples found in the ISIS Files detailed below, which included pledge forms by owners of harvest vehicles to not use them on any agricultural land, even their own, without a permit from the Department of Zakat and the Department of Agriculture.³²

Once again, highlighting the link between agriculture and *zakat*, several external Department of Zakat documents found in different provinces of the Islamic State defined what *zakat* is, what it is collected on (different types of agriculture), and when it is collected.³³ These documents also outlined the collection of *zakat* on agricultural enterprises even from “apostates” or those the Islamic State considered non-believers.³⁴ The Department of Zakat reminded farmers to pay *zakat* on their winter crops and threatened that violators would be reported to Islamic courts.³⁵ *Zakat* from crops is portrayed as a part of the state’s redistribution of wealth to the poor, and thus played an important part in the Islamic State legitimizing its rule to local populations.

Some of these external files from other provinces provided insight into the operational activities of the Agricultural Department of the Islamic State, such as the “Agricultural Summer Plan in Deir az-Zor Province” released by the Central Agriculture Department in Wilayat al-Kheir in 2015.³⁶ The directive encouraged the administration to engage with local farmers and ensure they were on board with the Islamic State’s farming plan for that summer. This very specific plan outlined that 30% of all crops should be “summer crops”, such as cotton, corn, and vegetables, while the remaining 70% should be single irrigation crops. The Department of Agriculture then outlined the importance of water conservation due to low

water levels, which dictated the division of planting for the summer. This document, along with documents in the ISIS Files collection, helps to demonstrate the Islamic State's close involvement with local farmers under its control in multiple different provinces.

Furthermore, several of the files also reveal the strategic nature and planning of the Agriculture Department, such as the 'General Notification: Agricultural Department', which declared that an economic war against the Islamic State was being waged, and as such there was a need for reserve stocks of grain in every home.³⁷ In at least one case, the Department of Agriculture in Wilayat Dijla even armed their employees; files from April 2015 included a weapons request form.³⁸ In August 2016, a directive from the Emir of the Department of Agriculture to all divisions laid out four points to help combat enemies of the Islamic State: 1) administration officials need a working knowledge of the members of the Diwan, 2) restrict movement between divisions, 3) meetings should be held exclusively among personnel, 4) no movement between bases.³⁹

Moreover, the Islamic State's emphasis on agriculture can be seen through their education plan once they took control of the University of Mosul. The group created and made public a list of several departments they claimed to control at the University of Mosul, including the Agriculture and Forestry College.⁴⁰ The organization not only put out a call for teachers, including those with vocational training in agriculture,⁴¹ but also encouraged students at the University of Mosul to transfer from supposedly defunct engineering departments to the functioning engineering departments, the agricultural and livestock department, the pure sciences department, or Sharia departments,⁴² all topics the Islamic State deemed to be vital for its state-building project.⁴³

After the declaration of the caliphate, the Islamic State also adjusted its propaganda to highlight the Department of Agriculture and its role in the group's governance of both territory and populations. The Islamic State's English-language propaganda,⁴⁴ Arabic-language propaganda,⁴⁵ and photo propaganda all touch on the group's control of agriculture.⁴⁶ The agricultural sector featured in the Islamic State's propaganda as evidence of the group's "statehood," with crops providing food for the population as

well as work for locals and people migrating to the area. For example, the Islamic State official Arabic propaganda claimed that under the Islamic State agriculture thrived and they detailed how the Department of Agriculture helped farmers, from the planting of seeds, to harvesting and selling products.⁴⁷ According to a 2018 analysis of Islamic State propaganda output, depictions of fertile farmland in the caliphate were part of the group's heavy focus on "utopia" propaganda showing a thriving daily civilian life and a functioning economy under its rule, specifically from 2014 to 2017.⁴⁸

While the Islamic State sought to portray its activities in building up agriculture, the group also understood the importance of food security and used the destruction of agricultural land as a weapon against its enemies. In May 2019, two al-Naba articles were published which focused on the Islamic State tactic of burning down enemy agricultural properties in Iraq (in Diyala, Salah al-Din, Kirkuk, and Ninawa provinces) and Syria (in south Hasakah province).⁴⁹

Interestingly, throughout its propaganda, the Islamic State boasted of the modern technology it used, including special laboratories for grain inspection.⁵⁰ However, these facilities were not new, but rather confiscated from the prior regime, using the infrastructure already in place. This tendency is also seen in other realms of Islamic State governance, such as healthcare. For example, the group boasted of its "new" and modern hospitals in Mosul, while in fact the hospitals had been built by Iraqi authorities before the Islamic State's occupation.⁵¹ While the Islamic State did not build these hospitals or special laboratories for grain inspection, they made sustained efforts at running them. The Islamic State used its propaganda to claim successful governance of what it described to be previously failing industries.⁵² However, it should be noted, much of what the group touted as evidence of the strength of its regime was really just a continued administration of an infrastructure that was already in place.

In sum, these external documents originating in other provinces and throughout the Islamic State's propaganda demonstrate that regulating the agriculture sector and maintaining agricultural production in the

areas it controlled was a major priority for the Islamic State. This was both a means of income and a way of projecting an image of successful state-building. Furthermore, as highlighted by discussions on *zakat*, the Islamic State sought to link its governance of agriculture to the insistence on paying *zakat*.

The next sections will detail the special collection of documents used in this paper, the ISIS Files digital repository, which we use to discuss how the Islamic State used agriculture to govern both people and land through a meticulous system of internal controls, confiscations, land leasing, and monitoring of agricultural production.

Part II: The Governance of Land and People Through Agriculture

Part II of this paper uses the George Washington University's ISIS Files digital repository to explore the Islamic State's governance of land and people through agriculture in Ninawa province between 2014 and 2017. This segment includes two sections.

Section I explores files related to the Islamic State's governance of land and people through agriculture by focusing on six issues. First, the group's policy of land confiscations from those the group deemed undesirable, and the subsequent redistribution of land to different divisions of the caliphate. Second, the Islamic State's implementation of land rental agreements, including information on renters and rent agreements, rent collection, and contract details. Third, the internal controls used by the group to control risks and ensure reliable financial reporting in its day-to-day operations. Fourth, the Islamic State's monitoring of harvests. Fifth, rent collection procedures and enforcement. And sixth, how the group sought to adjudicate disputes.

Section II looks at the function of the agricultural economy under the Islamic State. This section addresses four key issues. First, the Islamic State's market-based economy that used auctions to sell assets. Second, the group's control of imports and exports from both inside and outside its territories. Third, how direct price controls were used by the group, despite the claim that government-mandated maximum prices were against Sharia law. And finally, market intervention by the Islamic State against those traders they argued were using monopoly power to influence the market.

In essence, we use the ISIS Files digital repository to explore the organization's exercise of control over the agriculture industry, examining its effects on local populations, its ability to raise money, and its impact on spreading its ideology.

Section I: Islamic State Control Over Local Populations

One of the principles driving the Islamic State's control of agrarian lands centered on the need to control both land and people. Such control not

only aided in the group's finances, but solidified its governance. Agriculture fed populations under the Islamic State's control. But it did more than that. The control of agrarian lands meant the group controlled the people, their livelihoods, and their futures. The following subsection, using the primary sources found in the ISIS Files, explores how the Islamic State exploited and molded local populations to their governance and ideology, meticulously documenting every step of the way.

Confiscations and Redistribution

The Islamic State's control of agriculture in areas under its governance centered on a policy of confiscation and redistribution. Between June and October 2014, an individual writing under the name of "Abu Abdullah al-Masri" wrote a position paper entitled "Principles of Administration of the Islamic State."⁵³ Among other things, Chapter 6 discusses the management of wealth by the Islamic State, including the seizure of lands. The group laid out an eight-point plan that includes taking over infrastructure, retaining the personnel needed to run projects, ensuring Islamic State oversight, and establishing factories for local food production.

The Islamic State's land confiscation policies and procedures found in the Department of Agriculture files are consistent with the discussion of the Islamic State Real Estate files written about by Al-Tamimi.⁵⁴ For example, in the real estate files, the Islamic State details how properties were confiscated from different individuals, including "Rafidites, apostates, Christians, Nusayris and Yazidi."⁵⁵ Furthermore, the Islamic State clarified that they would confiscate the home of any individual who had a Sharia order issued against them by the Department of Judiciary. These Judiciary Department orders were sometimes carried out in cooperation with the Department of Real Estate and the Department of Spoils of War.⁵⁶ This shows not only a systematic policy of confiscation carried out by the Islamic State, but also methodological coordination between different Islamic State departments.

The collection of agricultural documents in the ISIS Files confirms that the Islamic State expropriated the land of those who they deemed enemies of the organization, refused to submit to the group's rules, and/or were outside the territories under its control (i.e., Shias,⁵⁷ Christians,⁵⁸

Yazidis, and “apostates,”⁵⁹ as well as people with presumed ties to the “Turkish state,”⁶⁰ Iraq’s Government-owned lands, and individuals outside of the caliphate).⁶¹ For example, one file discusses a former female landowner, defined by the Islamic State as a “Rafidhi” or rejectionist, a derogatory word to describe Shia Muslims.⁶²

Once confiscated, the land was transferred to a division of the caliphate (either the Department of Agriculture or Real Estate division), which would rent it to farmers able to cultivate the land. Within the files in the collection, current property owners are mostly listed as the Department of Real Estate,⁶³ while several files also mention the Department of Agriculture, Wilayat Ninawa Center.⁶⁴ The documents within the ISIS files collection do not provide sufficient insights into the criteria on how the land was allocated to each of these Departments. For example, to see how the Islamic State documented this confiscation process, several of the rental contracts in the ISIS Files list the former property owner as a Christian monastery, and the current property owner as the Islamic State Department of Real Estate.⁶⁵ These properties were then rented out to tenants who signed agreements with the Islamic State to farm the land.

Land Rental Agreements

The largest tranche of documents found among the agriculture ISIS Files relates to land rental agreements between the Islamic State and local populations seeking to farm the land. We identified over 400 Islamic State Department of Agriculture rental agreements, accounting for 75% of the agriculture documents in the ISIS Files digital repository.⁶⁶ As we discussed above, the Islamic State maintained a land confiscation policy and expropriated the land of those who opposed the caliphate and fled the territories it controlled. In the rental agreements, the Islamic State noted the former owner of the agricultural property. The rental agreements also show that the Islamic State collected detailed information on the farmers who rented that land. In this section, we discuss the economic and demographic data in these agreements. The data suggest a bureaucratic organization with increasing sophistication over time, and heavy oversight and strong controls.

In terms of demographic characteristics, the vast majority of the renters are male, although there are several female farmers and landowners.⁶⁷ For example, one file indicates that rental agreements were granted to women when the land was previously assigned to her husband, who passed away during the term of the agreement:

I respectfully request your approval to provide me with an agricultural contract to replace the one that my late husband, (*name erased for confidentiality*), had for an agricultural land in accordance with decision 463 of 8 October 1989. The rent for that land was paid up to end of 2013. The land is located within the working area of Nimrud Agricultural Office. Please issue a new contract in my name.⁶⁸

The median age of renters at the time of the agreement was 32, with ages ranging between 19 and 70 years old. Out of 180 reported civil statuses, 16 were single, 147 were married to a single wife, and the remaining were married to two⁶⁹ or more wives.⁷⁰ The most common place of birth of the renters is Ninawa, where the rental contracts were executed. Although for contracts starting in December 2015, the sample suggests some renters had migrated from other places, including Arbil,⁷¹ as identified by the city of birth stated in their associated identification card. The comprehensive collection of personal information on farmers shows the Islamic State's attention to detail on those that it governed.

The Department of Agriculture maintained strict control over the rental process. The process would start with a formal request from a potential tenant to rent land known to be available. Requests typically specify the size, location, and previous owner of the land. Upon receipt of the request, the Department of Agriculture sent an officer to perform an on-site survey of the land. The exact location (including a hand-drawn map of the land) was recorded, together with the size, characteristics (mainly if it was irrigated or rainfed),⁷² and the name and reason for the expropriation of the previous owner. Once the information was confirmed, a contract was drafted with the tenant, with explicit instructions of what was expected from the tenant and the limitations of their rights over the land.⁷³ The contracts include detailed information on the land and the tenant, including a copy of the tenant's National ID card and inked fingerprints.⁷⁴

The Islamic State kept meticulous records of those that lived under its governance, and the group held detailed lists of civilians' professions, properties, religious affiliations, links to the Iraqi regime, and other information.

All contracts in the sample spanned one agricultural season. The rental agreements found in the ISIS Files collection spanned two seasons. The following sections will look at the two seasons, exploring how these contracts changed over time.

The 1st Season (2014-2015)

For the 2014-2015 season, soon after the Islamic State took physical control, most rental agreements were "Partnership Agreements" between the caliphate and the renter. The first agreement of this kind in the collection is dated 4 November 2014.⁷⁵ The region covered by the ISIS Files was conquered on 10 June 2014. As such, this time lag could perhaps suggest that it took the Islamic State roughly five months to stabilize the region and implement its agricultural rental procedures. On the other hand, it is also possible that earlier documents that would support a shorter time lag are not part of the collection and are not publicly available elsewhere.

For the first season, the renter was not expected to pay a fee or make an upfront payment of any kind, but rather to split the harvest with the caliphate once reaped. One potential explanation for this arrangement is that farmers were cash constrained given that many lost their harvests in the prior season due to the conflict and needed credit assistance to start their operations. Another potential explanation is that, to bolster the Islamic State's popularity in the recently conquered region, Islamic State provided what could be seen as "free land" for those willing to cultivate it, and thus participate in the Islamic State's system of governance.

The very first agreements suggest that initially the profit shares were individually negotiated.⁷⁶ This is implied by the fact that the harvest-sharing arrangements between the renter and the Department of Agriculture vary (in one case a renter is promised 70% of the harvest and

in another case 60%). The seemingly negotiated terms are handwritten on top of printed frameworks that specify a standard split of 65% (farmer) and 35% (Islamic State). Aside from these early contracts, all other Partnership Agreements are for fixed 65%-35% shares. In these early Partnership Agreements, it appears that the caliphate was responsible for providing renters with seeds and pesticides.

A similar “soft” approach in the group’s initial involvement with locals can be seen in other fields of its governance. The first few months of Islamic State rule was characterized by the careful introduction of rules and regulations to win the hearts and minds of the population. As the group cemented its territorial control, regulations and rule enforcement became increasingly invasive and uncompromising.

For the initial rental agreements for the 2014-2015 season, it is unclear what criteria were used to assign the land. Collectively, the documents appear to suggest that any able farmer could request a plot of any size and kind (irrigated/rainfed) while providing nothing in exchange but the promise of a future production share.

The median size of rented land in the Partnership Agreements is 85 dunams.⁷⁷ The median size of a single lot is 20 dunams (i.e., the typical rental agreement is for 4.25 plots). Given there were no apparent limitations on how much land a tenant could request (or at least none found in the ISIS Files) and little penalty for nonperformance (the only risk appears to be that a farmer’s plot would be downsized if they were unable to harvest their entire plot), farmers likely had the incentive to request as much land as was available nearby. It seems reasonable to infer that these policies led to production inefficiencies.

However, an analysis of the rental agreements across seasons shows that when a farmer was not able to cultivate his land per the terms of the rental agreement, the land was quickly assigned to a new tenant. This is confirmed by some later contracts where a renter of the same land is recorded as “previous owner” specifying the reason that the land is being reassigned is that the previous renter is no longer able to work the land.

For instance, one contract includes the following statement “Size of land decreased to 2500 dunams, farmer unable to cultivate it all.”⁷⁸

Likely due to these issues in the first season, the Islamic State began to implement several changes which became evident in the second season.

The 2st Season (2015-2016)

For the 2015-2016 agricultural season, we observe several changes in the nature of the rental agreements. Partnership Agreements were still available, but for this new season, the renter had to commit to “the amounts of seeds per dunam, provided they are not less than 30 Kgs/dunam for wheat and barley” and also to spraying crops with the necessary pesticides.⁷⁹ Perhaps because of this shift in requirements, the number of Partnership Agreements declined significantly.

In the few cases when Partnership Agreements were executed, they were often later canceled because of the inability of the farmer to obtain the necessary seeds. It appears that it became difficult for farmers to obtain seeds in the market without the assistance of the State—suggesting either tighter centralized control of goods or supply shortages (or both). Interestingly, before the Islamic State occupation, Iraqi farmers relied on Iraqi authorities to provide them with seeds, fertilizer, and pesticides, and the Iraqi authorities were also a guarantor for income as they bought agricultural produce at fixed rates above the market price.⁸⁰

In the 2015-2016 season, fixed-rate arrangements became the most common type of rental agreement. The rent was set according to the size and the type of cultivable land. The cost of each non-irrigated dunam, which allowed the cultivation of winter crops including wheat, barley, and occasionally hay, was 5,000 dinars. For irrigated lands, which were less common in the area and allowed the cultivation of summer crops like vegetables, the cost was 25,000 dinars per dunam. These fixed rates did not change over time or with the total size of the land rented. For resource-constrained farmers, dunams could be divided into fourths, with the price being equally divided.

There are two potential advantages for the Islamic State in the adoption of the fixed-rate system. First, it is (ostensibly) transparent and fair, offering prespecified terms that apply to all farmers equally. Second, given that payment was requested in cash in advance (at the time the contract was signed), the fixed-rate agreements provided the Islamic State with a more predictable income stream. The burden of risk from a poor harvest was effectively transferred from the State to the farmer. The Islamic State shifted to the fixed-rate system at a time when their control in the region began to decline, and their need for funds became more urgent.

In some exceptional cases, we observe that payment was not made in advance.⁸¹ However, oversight of the land remained strict and the farmer continued to bear most of the risk. The progress of the harvest was regularly monitored and when the land was cultivated without rent payment the tenant was summoned to appear before the court and make immediate payment. For example, in one case the Islamic State mapped out a parcel of land that a farmer had been “illegally” cultivating for more than two years. In response, the group recommended that the land be rented to the individual.⁸² Interestingly, the Islamic State’s stance here was to ensure the farmer paid going forward. Furthermore, if the farmer failed to pay, or alternatively failed to provide acceptable collateral, the land was confiscated and reassigned to someone able to pay the rent in advance.⁸³ This way, the Islamic State could ensure they would be paid, even if at a later stage in the season, before the crops were mature enough to be cultivated.

As a sign of the increasing sophistication of the Department of Agriculture’s operations (or of the financial fortunes of farmers in the caliphate), beginning in November of 2015, the rental agreements show farmers were given the option to provide collateral, instead of making an upfront cash payment, when entering into a fixed-rate contract. Collateral was typically given in the form of a promissory note for a vehicle or property. The data suggest that a single vehicle (car or truck) could be used as collateral in multiple contracts (there is evidence of a single vehicle being used by up to three farmers).⁸⁴ There is no apparent correlation between land size and the amount of collateral requested.

In January 2016, there was another increase in the bureaucratic efficiency of the rental agreements. After this date, contracts are no longer individually drafted, but printed as templates with prespecified options to be selected that relate to the key features of the contract, including irrigation, the reason for confiscation of land, etc. There is no data available for contracts that were to be executed for the 2016-2017 season, so we cannot determine whether the 2015-2016 season's contract features and pricing scheme endured for more than one season.

Internal Controls in the Department of Agriculture

After taking control of a territory and its agricultural lands, the Islamic State sought to utilize its bureaucracy to administer these territories. Primary source Islamic State documents, including the ISIS Files, provide evidence of an extensive system of internal controls and recordkeeping maintained by the Department of Agriculture. Internal controls include the various ways that an organization controls risks and ensures reliable financial records. Strong internal controls help to ensure efficient and effective operations that accomplish an entity's objectives and protect its assets.⁸⁵ Our assessment of the documents we obtained from the ISIS files suggests that strong internal controls were essential to the Islamic State's ability to use agriculture as a source of funds for the caliphate.

The individual documents we discuss below provide evidence of processes and procedures implemented within the Agricultural Division that have characteristics typical of a strong internal control system. This is reflected in the meticulous detail with which each plot of arable land was surveyed, contracted out, and monitored. The Islamic State kept extensive transaction records and receipts for harvesting permits, cash transfers, and rent collection. They kept detailed inventory records and maintained guidance on human resources policies within the Department of Agriculture. Evidence across multiple documents also provides insights into how the Islamic State sought to control the activities of farmers within the caliphate.

This meticulous record-keeping is also apparent from the Islamic State's interest in Iraqi farmers that pre-dates the caliphate. For example, among the records in the ISIS Files is an Islamic State document that lists Iraqi

wheat and barley traders before the 2014 Conquest.⁸⁶ In another file, the Islamic State compiled a list of farmers and traders who worked with the Iraqi government before 2014.⁸⁷ These lists suggest that this information was used by the Islamic State to further exert its control over local populations, as well as take advantage of systems that were already in place.

The ISIS Files contain documents that afford some insights into the basic recordkeeping and control procedures the Islamic State followed, as well as the daily activities within the Department of Agriculture. In particular, documents recovered from the briefcase of an Islamic State accountant shed light on the bureaucratic operations of different departments within the caliphate.⁸⁸ For example, within the briefcase collection, there are over 30 documents related to daily revenue transfers from the Department of Agriculture Trade Division to the Islamic State Accountant for mill sales from the period of mid-October to the end of November 2016. The receipts indicate that approximately 2.3 billion dinars were transferred in total (about \$1.6 million).⁸⁹ The files also contain approximately 20 receipts of various types for activities and transfers including grain sales by individual traders, grain quantities received from various mills, and cash receipts for rents paid.⁹⁰ Additionally, the files also include records of inventory tracking of equipment and grains.⁹¹

One undated report details how the Trade Division of the Wilayat Dijlah Agricultural Center monitored the activities of grain mills within the wilaya.⁹² The detailed listing of activities include: 1) checking grinding work; 2) supervising work at grain bunkers; 3) overseeing the transport of emergency wheat supplies from Sherqat Silo to Hawija Complex; 4) ensuring mills were supplied with a monthly quota of wheat (1,450 tons for Dijlah and 420 tons for Ninawa); 5) testing stored grain, and; 6) repairing and maintaining equipment. Compliance with many of the aforementioned activities was verified with photographic evidence.

In another document, a directive from the General Division of Agricultural Lands to the lands department of the Wilayat Ninawa Agricultural Center provides details on human resource policies administered under the Islamic State. The directive gives guidance on staffing policies, including specific working hours (8 AM to 1 PM), attendance tracking, and leave day

policies (with ordinary leave not to exceed two days per month).⁹³ Other insights into the day-to-day operations of the Department of Agriculture come from Islamic State directives, such as commanding those working in service offices, including agriculture, to attend regular work hours,⁹⁴ and specifying who was allowed to travel outside of Mosul, with special dispensation given to farmers who were bartering property.⁹⁵

The Islamic State's efforts to develop reliable internal controls, extensive recordkeeping, and meticulous oversight of agricultural lands can perhaps speak (in part) to how the group was able to generate significant ongoing income from its agricultural operations.

Harvest Monitoring and Permits

The Islamic State appears to have maintained close control over the harvesting process, requiring signed pledges, harvesting permits, and ongoing monitoring of harvesting activities. The ISIS Files provide evidence of this control in documents that show that the Department of Agriculture required farmers to sign pledges, including their fingerprints, to sow the seeds they received from the Islamic State or be “subject to all consequences in accordance with the Sharia.”⁹⁶ Farmers were also required to sign pledges to use their own threshing machines. The pledge forms were detailed, requiring the owner to include the plate number and model of the thresher.⁹⁷ These documents are supported by similar forms found in Deir az-Zor Province of Syria, requiring every owner of a combine to go to the local *zakat* office, register their machinery and sign a pledge to use the machinery as dictated by the Islamic State harvest timetable.⁹⁸ These activities were standardized through the use of preprinted forms, starting around May 2016.⁹⁹

The rental agreements also indicate that the harvest was closely monitored. For example, in the template for “Partnership Contracts” under the “conditions of the contract,” the Islamic State noted that the number one condition was that “no harvesting can be conducted without the presence of an authorized person from the Department of Agriculture and the farmer or his agent.”¹⁰⁰ This clause suggests a very strict control over farmers' productivity, as well as measures to prevent potential fraud by the farmers when accounting for production quantities.

Documents dated between May 2016 and June 2016 show that farmers were required to obtain permits from the Department of Agriculture to harvest their lands.¹⁰¹ The information included on the preprinted permit forms includes the location and size of the land to be harvested, the crop type, land jurisdiction, parcel number, and details on the type of contract under which the property is held.¹⁰²

In addition to requiring permits, the Department of Agriculture also maintained a Harvest Monitoring Committee. A report on the activities of the monitoring committee (dated 19 May 2016) details site visits conducted between 7 – 19 May 2016 in various agricultural sections of the districts of Wilayat Dijlah.¹⁰³ These visits were conducted to ensure that the land was being farmed in accordance with the terms of the harvesting agreements and Agricultural Section directives. The surveys were also often substantiated with pictures of ongoing harvesting work and active machinery, suggesting that the Department of Agriculture felt it necessary to verify the work of their own monitors. Although most visits record no violations of the harvesters' responsibilities, there are a few mentions of infractions. For example, in one document, it is noted that several individuals had not signed commitments to provide their equipment for harvesting activities. The individuals were banned from work and detained until a harvester commitment was provided. Renters were summoned to court under the threat that "if you don't comply, you will be subject to (punishment in accordance with) legal Islamic accountability."¹⁰⁴

Rent Collection Procedures and Enforcement

Rents from the leasing of agricultural lands were an important source of revenue to the caliphate. Presumably, for this reason, they had detailed control procedures in place regarding the assessment of arable lands, the process for rent collection, and guidelines for dealing with non- and late payments. For example, the Agricultural Research Division conducted studies of lands within the caliphate to assess whether the correct rent was collected.¹⁰⁵ The files also show the Department of Agriculture maintained detailed receipts for rents paid.¹⁰⁶ Speaking to the Department of Agriculture's enforcement procedures, the ISIS Files contain a booklet¹⁰⁷ of 50 standardized summons forms dated between 16 June 2016 and 16 July 2016 for individuals to appear at the Agricultural

Center for various activities, including the payment of rent,¹⁰⁸ the signing of an agricultural lease, or an audit of the quantity of barley delivered. For each district, the Committee on Harvest conducted multiple rounds of monitoring and recorded (rare) violations.¹⁰⁹

Correspondence between the General Division of Agricultural Lands and the Department of Agriculture suggests that, because some farmers did not pay rent or paid it late, the Islamic State decided to adjust its payment plans with its farmer tenants. This readjustment of policy as a reaction to the behavior of local farmers underlines how governance by rebel groups is not merely a one-way imposition of rules from above.

For example, a directive sent from the General Division of Agricultural Lands dated 30 June 2016 instructs the Department of Agriculture “not to postpone payments of rent for irrigated lands, wholly or partially, and collect the rent directly at the signing of contracts”¹¹⁰ Later, in a directive dated 26 July 2016 the General Division to the Department of Agriculture discussed how the Department of Agriculture should improve its collection process to address this problem. The General Division claims that rent payments have been lagging because of “weakened follow-up efforts and the absence of tough actions against non-payers.”¹¹¹ Learning lessons from its past efforts, the Islamic State toughened control on land rent payments, to include: 1) taking inventories of all lands; 2) monitoring and taking (unspecified) actions for late payments; 3) making and maintaining electronic copies of all lands categorized into different registries for lands covered by Law 35, confiscated properties, privately owned lands, and for properties covered by Law 117;¹¹² 4) using pre-printed forms to track monthly changes in land and rent status; and 5) preparing reports on properties where rent has not been paid, including reasons for non-payment and actions taken against the non-paying tenants.¹¹³

A separate correspondence from the General Division (within the same file) indicates that the Department of Agriculture should set a payment date of 10 August 2016 for farmers with unpaid rent, before they are subject to “necessary actions against them.”¹¹⁴ As evidence of the Department of Agriculture’s efforts to enforce these policies, the ISIS Files

include an example of a warning sent to the owner of a flour factory for non-payment of rent dated 20 September 2016.¹¹⁵ The owner was ordered to pay the rent owed within two days or face a ban from working the rented space. This is one of several examples of how the Islamic State reacted to the actions of locals and adapted their bureaucratic rules during their governance to more efficiently reach their goals.

There are several possible explanations for why some farmers did not pay the rent imposed by the Islamic State or delayed their payment. A lack of income after losing much of the 2014 crop is one explanation. The Islamic State invaded agricultural provinces in Iraq just after harvest time in 2014, so farmers lost their harvest and a year's worth of labor and investment when the Islamic State took over silos and storage facilities. Harvested wheat, barley, and vegetables were also lost because of displacement and looting, and many were unable to plant for the next season. Many farmers also lost their income for 2015 because their loss of income from the 2014 crops left no money to buy seeds, fuel, and fertilizers.¹¹⁶ According to a Reuters report, among the many silos that were confiscated by the Islamic State was a silo in Makhmour housing eight percent of Iraq's wheat production.¹¹⁷ The group also confiscated agricultural machinery from farms and forced the previous owners to rent it back.¹¹⁸ Jaafar and Woertz also found that farmers lost income under the Islamic State because the group controlled the local market.¹¹⁹

Foot-dragging as a silent protest against the new rent regime imposed on them is another possible explanation for not paying rent to the Islamic State. In the realm of agriculture, the presence of the Islamic State for most of the remaining farmers meant a deterioration of their living conditions. When the Department of Agriculture made the rent collection process stricter, this was another negative development for the farmers struggling to make a living. Nevertheless, it shows that the Islamic State was alert to developments on the ground and that its administration evolved in response to the actions (or non-action) of locals.

The Dispute Resolution Process for Crop Damage

A series of documents discussing several (unrelated) crop damage complaints, and the process through which these complaints were

resolved, provide insights into how the Islamic State sought to display an image of protecting property rights for farmers under the caliphate who cooperated with their governance, as well as the Department of Agriculture's working relationship with other departments and ministries.

The Islamic State expected those under their governance to follow their directives and monitored who followed their planting instructions, and who did not.¹²⁰ For those who did not follow the Islamic State's directives, the Department of Agriculture took legal actions against them, reporting their names to the Islamic courts and asking them to take the 'appropriate' actions.¹²¹ Other day-to-day operations of the Department of Agriculture can be seen in the issuing of identification cards,¹²² as well as the branding of agriculture products.¹²³

We identified several examples of this in the ISIS Files. For example, on 3 March 2016, a complaint was filed with the Islamic Police alleging that an individual had caused serious damage to the plaintiff's crops.¹²⁴ A similar complaint was filed on 16 June 2016, when in the process of a Department of Agriculture review of a farmer's land, damage from grazing sheep was reported.¹²⁵ The latter file also includes a promissory note signed (and fingerprinted) by a defendant and filed with the Islamic State Islamic Police pledging not to allow the defendant's sheep to graze on cropland (in what appears to be an unrelated incident).¹²⁶ Further details into agriculture dispute resolution appear in a letter detailing a ruling by a "Financial Judge" as to how shepherds who heard their livestock on agricultural lands should be punished. It is stated in the letter that some of the livestock should be confiscated as a deterrent.¹²⁷

A survey report filed by the Agricultural Department with the Islamic State Islamic Police shows that they visited the site of alleged crop damage to assess the extent of the damage. The damage was confirmed and the Department of Agriculture provided a seemingly detailed calculation of the amount that should be repaid to the plaintiff based on the size of the area. The Islamic State calculated the size of the property (4 dunams), the percentage of damage (80%), the estimated production from the damaged area (4 dunams x 250/kg per dunam of barley), and the – according to the Islamic State - prevailing local price of barley

(200,000 dinars). The group stated that the amount of 160,000 (dinars) minus the costs of harvest, cleaning, and sowing (60,000 dinars) should be collected from the violators and given to the plaintiff.¹²⁸ The organization clearly laid out its calculations in resolving the dispute, seemingly protecting property rights for farmers under the caliphate who cooperated with their governance.

Overall, the evidence we describe in this section suggests that the Islamic State used its control of agrarian lands to control the people, their livelihoods, and their futures. Furthermore, this section provides some insight into how the Islamic State exploited and molded local populations to their governance and ideology and meticulously documented it every step of the way.

Section II: The Functioning of the Agricultural Economy

The agricultural documents associated with the ISIS Files provide a glimpse into the functioning of the agricultural economy in the Mosul area under the Islamic State. The second section of Part II will explore the Islamic State's utilization of known economic policies, some of which operated in direct contradiction to the ideology of some members of the Agricultural Department.

The combined evidence from the documents suggests that the Islamic State often relied on market forces (i.e., the actions of buyers and sellers to set prices rather than prices being controlled directly by the Islamic State) to ensure that the supply of agricultural products met the demand. However, there is also evidence of market interventions (i.e., actions by Islamic State that affect prices) motivated by large price increases leading up to Ramadan in June 2016. These interventions included selling crops from the Department of Agriculture's own inventory and attempts to curb what they perceived to be the misuse of monopoly power by private actors. The interventions appear somewhat ad hoc and there is evidence that opinions on the appropriateness of direct price controls under Sharia law were inconsistent across officials of the Department of Agriculture.

In terms of trade policy related to areas both inside and outside of the caliphate, the evidence suggests that the Department of Agriculture monitored (and sometimes restricted) exports more closely than imports.

Moreover, the evidence suggests that trade to and from the Mosul area were in practice restricted (either by the Islamic State directly and/or by market frictions in the form of monopolies or the influence of conflict) and that the restrictions lead to agricultural prices that differed substantially from prices in other regions outside the caliphate.

In this section, we substantiate the above conclusions by discussing documents related to auctions, export and import, direct price controls, and the Department of Agriculture's response to what it believed to be the misuse of monopoly power by private actors.

Auctions

Consistent with the Islamic State having a primarily market-based economy (i.e., one where the relatively unimpeded forces of supply and demand determine prices), several documents suggest that competitive auctions (e.g., the sale of crops to the highest bidder when several potential buyers have the opportunity to submit bids) was a common method used by the Department of Agriculture to sell and purchase crops. For instance, one document lists the outcomes of wholesale auctions of barley and wheat from June 2015 to May 2016.¹²⁹ Table 1 summarizes information about the auctions.

Over the nine-month period the document covers, there were 17 auctions—approximately one every two weeks, although not always at regular intervals. In aggregate, the auctions involved 74,977 tons of black and white barley and 10,281 tons of wheat. The total proceeds from the auctions were 15.9 billion dinars (approximately, USD 11 million).¹³⁰ The documents themselves do not clarify who received the proceeds from the auctions.

The auctions took place at 11 different locations and, across all auctions, 35 unique traders placed a winning bid. The large number of unique winners suggests that there was some degree of competition among traders. However, it is important to note that 7 traders account for more than 50% of the quantity of crops purchased at the 17 auctions. Despite the somewhat concentrated market, prices at the auctions fluctuated substantially from June 2015 to May 2016, which is consistent with the Islamic State using market mechanisms to allocate crops.

Another document shows that the Division of Trade also used an auctioning process when purchasing crops.¹³¹ This document, which is part of the set of documents discussed below under “Response to Misuse of Monopoly Power,” describes a tendering process in which three traders submitted offers to sell between 10,000 and 12,000 tons of wheat to the Department of Agriculture. According to the document, the prices offered by the three traders varied, and the Division of Trade picked the offer with the lowest price.

Auctions are a more transparent way to allocate resources than, for instance, the Agricultural Department setting prices and allocating grains to traders of their choice. It is possible that the Islamic State partly decided to use auctions because of their transparency and as a way to constrain the discretion of potentially self-interested employees of the Agricultural Department.

It is also clear from Table 1 that most of the crops sold were old, damaged, or impure, which may suggest that they were harvested prior to the Islamic State taking control of the Mosul area in June 2014.

Table 1: Auction Outcomes over Wheat and Barley

Auction number	Date	Location	Unique Buyers	Black Barley			White Barley			Wheat			Barley (no sort provided)			Revenue Qty X Price (millions)
				Quality	Qty. (Ton)	Price per Ton (avr.)	Quality	Qty. (Ton)	Price per Ton (avr.)	Quality	Qty. (Ton)	Price per Ton (avr.)	Quality	Qty. (Ton)	Price per Ton (avr.)	
1	6/9/2015	Baaj Silo	4	Old	6,000	147,833										887
2	20/9/2015	Multiple locations: Tal Abtah Yards Gogjali Talafar	3	Old	3,231	155,000		2,976	143,000							501
								214	150,000							426
3	4/10/2015	Multiple locations: Tal Abtah Yards Bazwaya	7		6,219	176,151		5,514	172,000		594	250,000				32
																2,044
4	21/10/2015	Multiple locations: Sharqat Silo Baaj Silo Gogjali Yards Sharqat Silo	4	New	1,498	180,000		Old	496	163,000						149
				Old	1,000	173,000					1,000	202,000				0
5	31/10/2015	Sharqat Silo	3								1,677	226,178				270
6	9/11/2015	Talafar Silo	1							Damaged	560	206,000				173
7	8/12/2015	Multiple locations: Tal Abtah Yards Mosul Yards	2				Damaged	214	145,777							81
				Old	9,900	160,000										202
8	22/12/2015	Baaj Silo	3	New	10,000	185,500										379
9	26/12/2015	Al-Nujafi Yards	5	Old	1,453	173,000										115
10	16/01/2016	Multiple locations: Baaj Silo Iraqya Company	7	New	6,527	192,480					Impurities	1,087	240,000			0
				Old	7,000	201,821										1,256
11	11/2/2016	Talafar Silo	5	Old	3,826	260,480										261
12	5/3/2016	Talafar Silo	4	Old												1,413
13	No date avail.	Mosul Yards	2													997
14	23/03/2016	Mosul Yards	2										Old	2,949	222,462	0
15	29/03/2016	Talafar Silo	3	Old	2,999	207,917										656
16	25/04/2016	Mosul Yards	2				Old	63	185,000	Damaged	100	140,000	Damaged	100	140,000	624
17	3/5/2016	Multiple locations: Talafar Silo Mosul Yards	4	Old	2,182	180,000	Old									39
							Old	448	161,000							0
																393
																72
Total					61,836	2,393,183		9,924	1,119,777		10,281	1,490,651		3,217	491,462	15,904

Source: Document ISIS Files 20_001096.

Overall, the auction data are consistent with the Agricultural economy of the Islamic State often relying on market forces to allocate resources as opposed to setting prices centrally. This conclusion will be qualified in the next sections that document the various ways that the Islamic State intervened in attempts to control the prices of agricultural products.

Export and Import

Several documents suggest that import and export, both to and from other parts of the caliphate or outside of the caliphate, occurred. However, it is also clear that the Islamic State monitored and likely restricted exports and that the ongoing conflicts at times prevented imports from outside the caliphate. This suggests that the agricultural economy in Mosul was semi-closed (i.e., there were restrictions on exports with outside parties, but exports may have occurred to some extent based on evidence of export permits being requested). The ambiguity surrounding export policies is also apparent from external sources where media reports suggest that the Islamic State banned grain exports from Mosul in order to ensure food security in May 2015, whereas directive no. 102 of the General Governing Committee from October 2015 permits exports of all agricultural and grain products, except wheat.¹³²

In one document, signed by the Emir of the Department of Agriculture, a request to export outside of the caliphate appears to have been rejected.¹³³ In another document, there is even evidence of an attempt by the Department of Agriculture to restrict exports to other parts of the caliphate (from Wilayats Aljazeera, Ninawa, Dijlah, and Kirkuk to Sham, or Islamic State-controlled Syria).¹³⁴ We are unable to establish from the documents the extent to which the attempt to limit trade within the caliphate was successful.

As evidence of frictions preventing free trade within the caliphate, in one document, the General Sales Section argues that price differences between Sham (i.e., Islamic State-controlled Syria) and the Mosul area were not justified by the transportation costs.¹³⁵ The document explains that the price per ton of wheat was 276,000 dinars in Sham and transportation cost to the Mosul area was 15,000 dinars per ton (i.e., a total import cost of 291,000 dinars). However, according to the

document, traders in the Mosul area were offering wheat at an “inflated” price of 410,000 dinars. The General Sales Division suggests that the reason for the inflated prices was market manipulation by traders (we discuss the Department of Agriculture’s interventions below). Regardless of the reason for the inflated prices, it is clear that the agricultural economy of the Mosul area was, at times, isolated from outside areas (and even other parts of the caliphate).

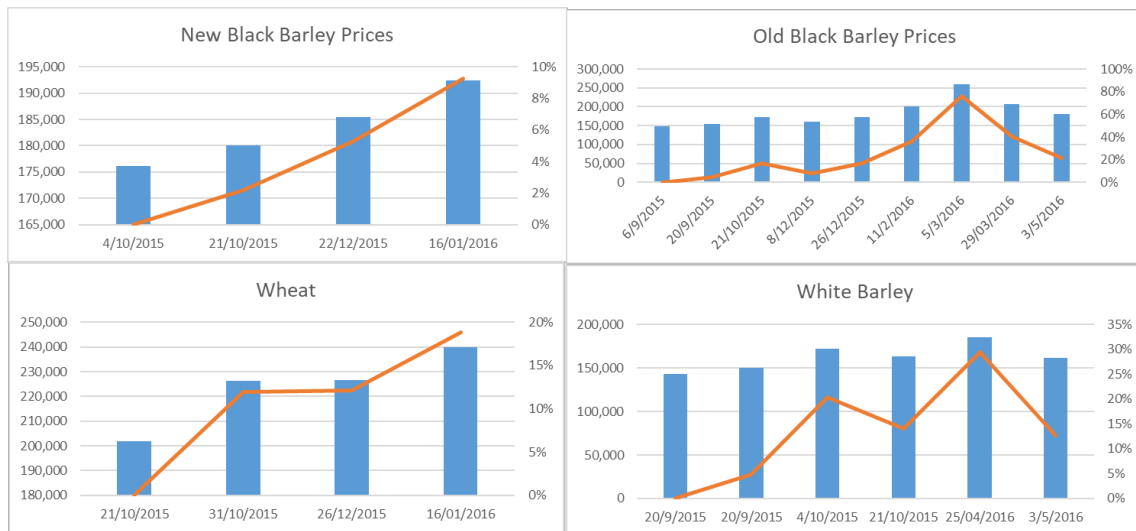
It is unclear from the ISIS Files why the Department of Agriculture argues that prices are higher in the Mosul area than in other parts of the caliphate, while attempting to restrict exports from the Mosul area (i.e., there should be no need to restrict the export of relatively higher priced goods). In a market without trade restrictions, market forces should incentivize traders to purchase goods in areas with relatively lower prices and sell them in areas with relatively higher prices.

Regarding imports from outside of the caliphate, one document briefly discusses supplies of “flour and food stuff” from Turkey.¹³⁶ The discussion is in the context of imports being restricted “for a day or two” due to fighting between Sahwa (Awakening Councils) and PKK (Kurdistan Workers’ Party) close to border crossings. Although we have found no evidence of import permits among the documents we reviewed, this limited evidence suggests that the Islamic State had no apparent issue with importing agricultural products from outside the caliphate, but that imports were at times restricted due to the ongoing conflict. This is also consistent with external sources that describe how imported goods were visible in Islamic State videos. However, several external documents show that there were at times import restrictions on Iranian food and medical goods, as well as meat from Turkey.¹³⁷

Consistent with exports and imports not flowing freely into and out of the Mosul area, there is evidence that wholesale prices at auctions differed substantially from world prices. Figure 1 summarizes the wholesale prices of new black barley, old black barley, wheat, and white barley based on the data reported in Table 1. Figure 1 shows a general price increase across all four grain types from June 2015 to March 2016. The apparent price decrease from March 2016 to June 2016 may reflect the market

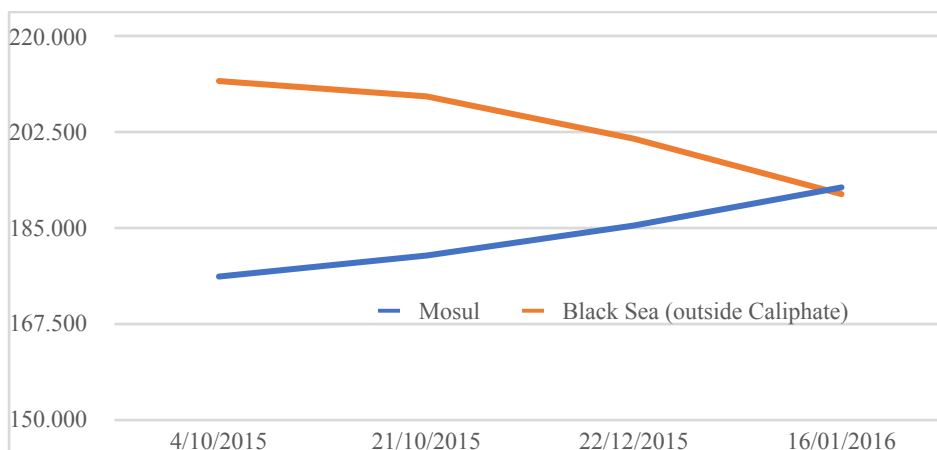
interventions by Islamic State that we describe below, although the limited data (two data points for old black barley and one for white barley) makes it difficult to definitively conclude that prices actually decreased or what the cause of any price decrease was.

Figure 1: Wholesale prices of crops from Auctions June 2015 to May 2016



Source: Document ISIS Files 20_001096.

Figure 2: Barley Price by Ton in Black Sea Region and Mosul



Source for prices in the Black Sea Region: <https://fpma.apps.fao.org/giews/food-prices/tool/public/#/dataset/international>

Source for prices in the Mosul area: Analysis of data in document ISIS Files 20_001096.

Perhaps the crop most comparable to crops traded outside of the caliphate was new black barley. Arguably, the world prices for old, damaged, or impure crops are harder to establish, as those crops are unlikely comparable to the crops sold outside of the caliphate. We have data on four auctions of new black barley from October 2015 to January 2016 in the Mosul area. Despite the limited data, the prices at the four wholesale auctions show a clear upward trend (see blue line in Figure 2). Contrary to the upward trend in the Mosul area, Figure 2 shows that the prices for black barley in the Black Sea region (outside of the caliphate) trend downwards over the same period. The fact that prices in the Mosul area did not move in the same direction as prices outside of the caliphate is consistent with barriers preventing free trade between the caliphate and regions outside of the caliphate — possibly in the form of periodic export restrictions by the Islamic State.

Direct Price Controls

The evidence on the use of direct price controls is mixed. Indeed, in one document, an official from the Division of Trade argues that price controls — government-mandated maximum prices — are against Sharia law because “God alone fixes prices.”¹³⁸ At the same time, even in the same paragraph, the author noted that an official from the Trade Control Division, and a member of the Delegate Committee, agreed with local mill owners and traders to implement price controls for flour at a local market sometime in the first half of 2016.¹³⁹ Other documents show clear examples of direct price controls. For example, in 2015, in an external primary source document found in Deir az-Zor, directives released by the Department of Agriculture regulated the price of flour and bread.¹⁴⁰ Another external document issued by the Islamic State Health Department in Ninawa stipulates fixed prices for pharmaceutical goods as a response to soaring pharmaceutical prices.¹⁴¹

These mixed signals on direct price controls underline how the Islamic State continuously had to reconcile conflicting interests. While the first document indicates that a free market was seen by some as ideologically correct, the attempts at direct price control show that the Islamic State also needed to consider the legitimacy of its rules among locals. If prices spun out of control — which they increasingly did in Mosul — it harmed the

group's reputation as people struggled to make ends meet. The disagreement on the appropriateness of direct price controls is also consistent with the disagreement on the issue among scholars of Sharia law.¹⁴²

Islamic State's use of price controls is also documented in other areas under their control. In Syria, the Islamic State took control of territories and reopened bakeries to begin food distribution,¹⁴³ often selling bread at lower prices in order to undermine the government and rival groups.¹⁴⁴ According to Jaafar and Woertz, the Islamic State in Iraq attempted to control price increases on food items. These attempts were often futile because the sieges and military campaigns to uproot the group resulted in steep increases in food prices in the Islamic State-held areas compared to other areas of Iraq.¹⁴⁵ There was severe food insecurity and famine in several regions controlled by the Islamic State in both Iraq and Syria, with the situation deteriorating during the course of its rule.

Response to Misuse of Monopoly Power

The ISIS Files provide evidence that the Department of Agriculture monitored the agricultural market closely and intervened in various ways to prevent large price increases. In particular, one file contains several documents related to the Department of Agriculture's attempt to alleviate rising wheat prices leading up to Ramadan in June 2016 (the price increase discussed in these documents is visible in Figure 1).¹⁴⁶ The file contains, among other documents, the response of the Division of Trade to a complaint from the Ombudsman, an appointed official tasked with investigating complaints of impropriety or maladministration, of the Department of Agriculture. From the documents, it appears that the Ombudsman criticized the Department of Agriculture's (lack of) response to rising wheat prices. The documents explain that the Trade Control Section initiated an investigation after the price of a sack of flour increased to more than 30,000 dinars on December 22, 2015, on what the documents refer to as the "Exchange market." The investigation led to the allegation that a number of traders exploited their monopoly power by hoarding local wheat. The Trade Control Division claims that hoarding traders gradually sold their stored crops in a way that prevented price decreases—the document does not specify how exactly the traders accomplished that.

An official from the Division of Trade explains that they responded to the price increase by initiating several market interventions. First, on February 28, 2016, they suspended commercial grinding for 10 days. This was an attempt to reduce the demand for wheat and, consequently, wholesale prices. Second, the Division of Trade reports having sold a total 1,225 tons of wheat across Wilayat Ninawa, Aljazeera, Diljah, and Kirkuk, presumably, from the department's own inventory. Third, officials of the Department of Agriculture gathered the suspected traders for "an Islamic lecture on monopoly." In a file attached to the document from the Division of Trade, an official from the Trade Control Section confirms much of the information from the Division of Trade. However, the official from the Division of Trade added that the suspension of commercial grinding was offset by grinding 1,000 tons of wheat from the Islamic State's own reserves and selling the flour on the market at a subsidized price, approximately 10,000 dinars below the market price. The Trade Control Section also reports that the price of flour was later fixed at 22,000 dinars per sack (see our discussion above for contradicting evidence on price controls).

Overall, the evidence on market interventions suggests that the Department of Agriculture closely monitored the prices of agricultural products and was concerned about rising wheat prices, presumably because they cared about the concerns of the general population. The concern for public opinion is also consistent with the existence of an Ombudsman within the Department of Agriculture and the careful response to criticism by the Ombudsman.¹⁴⁷ The decision by the Islamic State to appoint (or keep from the previous regime) such a figure points, at least in theory, to the group seeking to engage with local populations and address complaints about its administration.

Conclusion

The findings presented in this paper draw a picture of a complex system of governance designed to maximize agricultural income for the Islamic State in the Ninawa province. The available files give the impression of an organization with strong internal controls, evoking the workings of a business enterprise rather than a terrorist group. The confiscation and redistribution of land, harvest monitoring, and rent collection are all meticulously documented. The documentation of the agricultural economy has revealed a curious contradiction in the Islamic State's view on the economy more generally; in part encouraging a "free market," and in part restricting exports and directly controlling prices and the activities of the citizens of the caliphate.

It is important to bear in mind that the paperwork produced by the group alone does not give a full description of the actual implantation of its policies on the ground. First, access to documents is limited. Second, Islamic State administrative files have often been found to paint a picture of a more systematic and efficient organization than what is described by civilians who were at the receiving end of its policies. That said, given the hurried manner in which many Islamic State primary source documents were obtained, the organization seemingly had no way of knowing that these documents would ever be made public, and as such, did not have much opportunity to clean them up to better their image. Nevertheless, the extensive bureaucracy put in place, aiming to control and tax every step of agricultural production, underlines that this was a key sector for securing the Islamic State's finances.

For locals, the overall effect of Islamic State rule, and the military campaign to expel it, was a loss of life, property, crops, and income, as well as neglect or destruction of vital infrastructure that could take years to rebuild.¹⁴⁸ With widespread theft, forced redistribution of land, and heavy taxation, the group's rule over Ninawa's agriculture was a relatively clear example of so-called predatory governance by a rebel group. William Reno has described how predatory rebels do sometimes engage in state-building, as in the case of the Liberian NPFL, but they do so exclusively for their own immediate economic and political benefit. The "institutions"

they run are hollow shells intended to create outside recognition and ease the exploitation of civilians.¹⁴⁹

In the case of agriculture, the Islamic State made several small efforts to legitimize its governance to locals, including its claims to control prices and protect land rights. However, as our evidence suggests, the funds raised through this bureaucracy generally came at the expense of the livelihood of local farmers. The system of control explored throughout this paper was geared towards maximizing the income of the Islamic State. Even actions, such as the solving of land disputes, which one could argue sought to legitimize the group in the eyes of landholders, could also be viewed as evidence of the group seeking to adjudicate on disputes that disrupted the Islamic State's income. In the difficult balancing act between fostering legitimacy and serving its own immediate military and financial interests, existing research has shown that the Islamic State most often prioritized the latter and made choices that increased civilians' suffering.¹⁵⁰ The findings on its agriculture governance confirm this.

Overall this paper suggests several overarching insights. First, that agriculture allowed the Islamic State to control land, food, populations, and the economy. Agriculture provided the Islamic State with an income stream that was not only more resilient to external attacks than other sources, but also one that played into the group's governance ambitions, allowing them to convey the appearance of a legitimate state. Once ridding themselves of those they deemed to be the out-group, and appropriating their land and property for their own advantage, the ISIS Files provide some evidence that the Islamic State sought to demonstrate a response to the needs and requests of the population they governed. While perhaps not a genuine gesture, in doing so, the group sought to engender support from local populations and portray itself as the legitimate Islamic caliphate. However, it's also questionable how successful they were at this, and how successful any sort of rebel regime could be in operating as a legitimate state.

Second, the files point to how agriculture allowed the Islamic State to demonstrate, through its actions, a real-world manifestation of its Salafi-Jihadi ideology. This ideology, which divided the world into the in-group

and the out-group, left no room for those who challenged the group. The Islamic State used its control of land and food to implement its ideology and religious stipulations. For example, by forcing all farmers to make *zakat* payments, or confiscating land from those it deemed to be undesirable and unfit to be part of their caliphate.

Third, the agriculture documents suggest that while most of the local population did not believe in the Islamic State ideology, many were forced to participate in it. The agriculture files show that many civilians living under the Islamic State did not overtly challenge the group's authority and in many cases showed outward deference to the organization and its governance. That is likely because the Islamic State's ideology was tied to its governance. For individuals unable or unwilling to leave, and thus forced to stay under the Islamic State's control, compliance was often a means of survival.

Finally, this paper finds that while a group like the Islamic State is driven by its ideology, which can bring people together, this ideology can also break them apart. For example, discussions centering on price controls, which were simultaneously deemed un-Islamic by the Islamic State, but also implemented by the group for practical reasons. In addition to showing the complexity of Islamic State agricultural governance, the paper has detailed how the Islamic State adjusted its policies and its bureaucracy to realities on the ground, as shown in the evolution of how it dealt with local farmers. That is, once they were desperate, things broke down and they were forced to exploit the resources of the local population (presumably under the threat of violence). Perhaps this was ultimately part of their undoing; as the local population became less sympathetic, they were probably more willing to cooperate with attempts to overthrow the regime.

¹ For more information on this, please see: Bunzel, Cole. 2015. "From Paper State to Caliphate: The Ideology of the Islamic State." *The Brookings Institute*, no. 19: 1–45.; Fishman, Brian. 2016. *The Master Plan: ISIS, Al Qaeda, and the Jihadi Strategy for Final Victory*. Yale University Press.; Ingram, Haroro J, Craig Whiteside, and Charlie Winter. 2020. *The ISIS Reader: Milestone Texts of the Islamic State Movement*. Oxford University Press, USA.; Whiteside, Craig. 2016. "New Masters of Revolutionary Warfare: The Islamic State Movement (2002-2016)." *Perspectives on Terrorism* 10 (4).

² The Islamic State. 2016. "The Structure of the Caliphate." *Al-Furqan Media Foundation*. 6 July 2016. <https://jihadology.net/2016/07/06/new-video-message-from-the-islamic-state-the-structure-of-the-caliphate/>.

³ For the Islamic State, the out-group included Christian, Druze, Yazidi, Shia, and even Sunni Muslims deemed 'apostates' for not adhering to the Islamic State's version of Islam. The Islamic State created three distinct systems of the out-group: (i) "original disbelievers entitled to a *dhimmi* pact" (such as Jews and Christians). This protection pact was an agreement between Muslim rulers and non-Muslim inhabitants who lived in an Islamic State with legal protections. In exchange for loyalty to the state, these protected groups were required to pay a *jizyah* tax. (ii) "apostates" (e.g. Shia Muslims and others the Islamic State did not consider to be Sunni Muslims). (iii) "original disbelievers not entitled to a *dhimmi* pact" (e.g. Yezidis). The Islamic State confiscated the lands of 'apostates' and disbelievers not entitled to a 'protection' pact. Those of the out-group entitled to a 'protection' pact- primarily Christians- could keep their lands if they submitted to the Islamic State's authority. However, in Iraq, many of these individuals fled Islamic State territory and consequently their lands were taken by the group.

⁴ Mampilly, Zachariah. 2011. *Rebel Rulers: Insurgent Governance and Civilian Life During War*. Ithaca, NY: Cornell University Press.

⁵ Martínez, José Ciro and Brent Eng, "Struggling to Perform the State: The Politics of Bread in the Syrian Civil War." *International Political Sociology*, Volume 11, Issue 2, June 2017, Pages 130–147.

⁶ Arjona, Ana, Nelson Kasfir, and Zachariah Mampilly. 2015. *Rebel Governance in Civil War*. Cambridge University Press.

⁷ Asal, Victor, Shawn Flaniganban, and Ora Szekely. 2020. "Doing Good While Killing: Why Some Insurgent Groups Provide Community Services." *Terrorism and Political Violence Online*.

⁸ Suykens, Bert. 2015. "Comparing Rebel Rule Through Revolution and Naturalization: Ideologies of Governance in Naxalite and Naga India." In Arjona, Ana, Nelson Kasfir, and Zachariah Mampilly (Eds.). 2015. *Rebel Governance in Civil War*. Cambridge University Press.

⁹ Martínez, José Ciro and Brent Eng, "Struggling to Perform the State: The Politics of Bread in the Syrian Civil War." *International Political Sociology*, Volume 11, Issue 2, June 2017, Pages 130–147.

¹⁰ Al-Tamimi, Aymenn Jawad. 2015. "The Archivist: Unseen Islamic State Financial Accounts for Deir az-Zour Province." *Aymenn Jawad Al-Tamimi's Blog*, <http://www.aymennjawad.org/17916/the-archivist-unseen-islamic-state-financial>.

¹¹ Research by the Atlantic Council notes that even today agriculture is the second largest contributor to Iraq's GDP, after oil revenues. In 2003, it was estimated at 20% of GDP, while in 2019 it dropped to 3.3%. See: Fathallah, Hadi and Timothy Robertson. 2020. "How the agri-food sector can turn Iraq's economy around." Atlantic Council. <https://www.atlanticcouncil.org/blogs/menasource/how-the-agri-food-sector-can-turn-iraqs-economy-around/>; see also: World Bank Group. 2019. "Iraq Economic Monitor Turning the Corner: Sustaining Growth and Creating Opportunities for Iraq's Youth." World Bank. <https://documents1.worldbank.org/curated/en/848371571505101026/pdf/Iraq-Economic-Monitor-Fall-2019-Turning-the-Corner-Sustaining-Growth-and-Creating-Opportunities-for-Iraq-s-Youth.pdf>.

¹² Regional Food Security Analysis Network. 2016. "The Impact of ISIS on Iraq's Agricultural Sector – Situation Overview." December 2016. https://reliefweb.int/sites/reliefweb.int/files/resources/07122016_IRQ_Iraq_Agri_Brefing_V2.pdf.

¹³ Food and Agriculture Organization of the United Nations. 2016. "Agriculture and Livelihoods Need Assessment. On the Newly Liberated Areas of Kirkuk, Ninewa and Salahadin." https://reliefweb.int/sites/reliefweb.int/files/resources/FAO_Assessment1.pdf. p. 11.

¹⁴ Jaafar, Hadi H. and Eckart Woertz. 2016. "Agriculture as a funding source of ISIS: A GIS and remote sensing analysis." *Food Policy*. Volume 64, 2016, Pages 14-25, <https://doi.org/10.1016/j.foodpol.2016.09.002>. p.17.

¹⁵ Jaafar, Hadi H. and Eckart Woertz. 2016. "Agriculture as a funding source of ISIS: A GIS and remote sensing analysis." *Food Policy*. Volume 64, 2016, Pages 14-25, <https://doi.org/10.1016/j.foodpol.2016.09.002>.

¹⁶ The authors thank Aymenn Jawad al-Tamimi for archiving and sharing these documents.

¹⁷ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 10O: Regulations on bread prices (Aleppo province). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

¹⁸ The ISIS Files 20_001157; Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 10V: Prices of bread, northern Deir az-Zor province. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

¹⁹ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 8S: Negotiations and ceasefire agreement with the regime over the thermal plant and surrounding in Aleppo, June 2013. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

²⁰ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 8T: Notice to those who own harvest vehicles, Hasakah province. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

²¹ For an analysis of Islamic State News and Islamic State Reports please see: Ingram, Haroro J. 2018, “Islamic State’s English-language magazines, 2014-2017: Trends & implications for CT-CVE strategic communications.” *International Centre for Counter-Terrorism – The Hague. (ICCT)*. <https://icct.nl/wp-content/uploads/2018/03/ICCT-Ingram-Islamic-State-English-Language-Magazines-March2018.pdf>.

²² The Islamic State. 2014. “Islamic State Report Issue 2.” *Al-Hayat Media Center*. 10 June 2014. <https://jihadology.net/2014/06/07/al-%e1%b8%a5ayat-media-center-presents-a-new-issue-of-the-islamic-state-of-iraq-and-al-shams-magazine-islamic-state-report-2/>. p. 1.

²³ It is a commonly held belief in Islam that giving *zakat* is linked with the growth (and purification) of wealth.

²⁴ The Islamic State. 2014. “Islamic State News Issue 3.” *Al-Hayat Media Center*. 7 June 2014. <https://jihadology.net/2014/06/10/al-%e1%b8%a5ayat-media-center-presents-a-new-issue-of-the-islamic-state-of-iraq-and-al-shams-newsletter-islamic-state-news-3/>. p. 5.

²⁵ The Islamic State. 2014. “Islamic State Report Issue 2.” *Al-Hayat Media Center*. 10 June 2014. <https://jihadology.net/2014/06/07/al-%e1%b8%a5ayat-media-center-presents-a-new-issue-of-the-islamic-state-of-iraq-and-al-shams-magazine-islamic-state-report-2/>. p. 2.

²⁶ The Islamic State. 2014. “Islamic State News Issue 2.” *Al-Hayat Media Center*. 5 June 2014. <https://jihadology.net/2014/06/05/al-%e1%b8%a5ayat-media-center-presents-a-new-issue-of-the-islamic-state-of-iraq-and-al-shams-newsletter-islamic-state-news-2/>. p. 1.

²⁷ Please see: Groll, Elias. 11 June 2014. “The Beginning of a Caliphate: The Spread of ISIS, in Five Maps.” *Foreign Policy*. <https://foreignpolicy.com/2014/06/11/the-beginning-of-a-caliphate-the-spread-of-isis-in-five-maps/>.

²⁸ The Islamic State. 2016. “The Structure of the Caliphate.” *Al-Furqan Media Foundation*. 6 July 2016. <https://jihadology.net/2016/07/06/new-video-message-from-the-islamic-state-the-structure-of-the-caliphate/>.

²⁹ The Islamic State. 2015. “Food Security: Aspects from the Work of the Agriculture Administration in the Province – Wilayat Halab”. *Wilayat Halab Media Office*. Translated by Aymenn Jawad al-Tamimi. <https://jihadology.net/2015/11/10/new-video-message-from-the-islamic-state-food-security-aspects-from-the-work-of-the-agriculture-administration-in-the-province-wilayat-%e1%b8%a5alab/>.

³⁰ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents (cont.)” Specimen 16W: Notification on the administration structure of Fallujah province. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

³¹ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 11T: Notice to those who own combines, Deir az-Zor Province (2015). *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents.>; Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 11U: Notice to those who own combines (2). *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

³² The ISIS Files 35_001625.

³³ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 2U: On Zakat al-Fitr, Aleppo Province. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

³⁴ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 2N: Fatwa on Apostates' Agricultural Enterprises and Zakat. “Al-Buhuth wa al-Eftaa' Committee, Fatwa No.: 36.” *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

³⁵ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents (cont.)” Specimen 21D: Deadline warning to pay zakat on agricultural crops, Aleppo province. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

³⁶ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 4P: Agricultural Summer Plan in Deir az-Zor Province. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

³⁷ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 4V: General Notification: Agricultural Department. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

³⁸ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 24D: Request to supply individuals with weapons, Shirqat. *Aymenn Jawad Al-Tamimi’s Blog*, <http://www.aymennjawad.org/2016/09/archive-of-islamic-state-administrative-documents-2>.

³⁹ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 32P: Agricultural department directives. *Aymenn Jawad Al-Tamimi’s Blog*, <http://www.aymennjawad.org/2016/09/archive-of-islamic-state-administrative-documents-2>.

⁴⁰ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 8I: Names of university colleges and institutes. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>; Al-Tamimi, Aymenn Jawad. 2015. Specimen 8X: Structure of Islamic State-controlled Mosul University. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁴¹ Al-Tamimi, Aymenn Jawad. 2015. “Archive of Islamic State Administrative Documents.” Specimen 4O: New employment opportunities for teachers. *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁴² Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 12R: Notice on non-functioning engineering departments at Mosul University (c. November 2015). *Aymenn Jawad Al-Tamimi’s Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

⁴³Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen U: Notification on Supplementary Exams for Mosul University (Various Colleges). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁴⁴ When looking at English-language propaganda published after the declaration of the caliphate, such as Dabiq and Rumiya, there are only passing references to agriculture. In fact, most of the references were derogatory references to agricultural cultures that do not fight.

⁴⁵ This included several issues of Al-Naba as well as several Arabic language videos. For example, see: Aymenn Jawad Al-Tamimi. 2019. "Burning of Farms in Iraq and Syria by the Islamic State" *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2019/05/burning-of-farms-in-iraq-and-syria>.; Aymenn Jawad Al-Tamimi. 2019. "Burning of Farms in Iraq and Syria by the Islamic State (II)" *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2019/06/burning-of-farms-in-iraq-and-syria-by-the-islamic>.

⁴⁶ The analysis of the Islamic State's photo propaganda is a new but slowly growing field. The authors would like to thank Aaron Zelin for sharing a collection of over 100 photos originating from the Islamic State official media in both Syria and Iraq. These images were similar to those that appeared in the video propaganda, as well as in magazines produced by the Islamic State (specifically Islamic State News and Islamic State Report). These images portrayed farming techniques, including the use of different irrigation methods and harvesting tools, carried out by the Islamic State. Additionally, a photo from Iraq demonstrates the administration, as it contains an image of the Islamic State providing a receipt to a farmer. Titled "Al-Jazirah Province, a photo report of the work of the Agriculture Center - the barley harvest season in the city of Tal Afar." May 9, 2016. (It was decided to exclude the photo as it contained too much personally identifiable information.)

⁴⁷ The Islamic State. 2015. "Agriculture in Wilayat al-Jazirah". *Wilayat al-Jazirah Media Center*. Translated by Aymenn Jawad al-Tamimi. <https://jihadology.net/2015/09/10/new-video-message-from-the-islamic-state-agriculture-in-wilayat-al-jazirah/>.

⁴⁸ Winter, Charlie. 2018. "Apocalypse, later: a longitudinal study of the Islamic State brand." *Critical Studies in Media Communication*. 35:1, 103-121, DOI: 10.1080/15295036.2017.1393094.

⁴⁹ Full translations of the al-Naba articles can be found here: Aymenn Jawad Al-Tamimi. 2019. "Burning of Farms in Iraq and Syria by the Islamic State" *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2019/05/burning-of-farms-in-iraq-and-syria>.; Aymenn Jawad Al-Tamimi. 2019. "Burning of Farms in Iraq and Syria by the Islamic State (II)" *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2019/06/burning-of-farms-in-iraq-and-syria-by-the-islamic>.

⁵⁰ The Islamic State. 2015. "Agriculture in Wilayat al-Jazirah". *Wilayat al-Jazirah Media Center*. Translated by Aymenn Jawad al-Tamimi. <https://jihadology.net/2015/09/10/new-video-message-from-the-islamic-state-agriculture-in-wilayat-al-jazirah/>.

⁵¹Becker Aarseth, Mathilde. Forthcoming 2021. *Mosul under ISIS: Eyewitness accounts of life in the caliphate*. London: I.B. Tauris.

⁵² For criticisms of Iraqi corruption prior to the rise of the Islamic State, see: Agator, Maxime. 2013. "Iraq: overview of corruption and anti-corruption." *Transparency International*. https://www.transparency.org/files/content/corruptionqas/374_Iraq_overview_of_corruption_and_anticorruption.pdf.

⁵³ Al-Tamimi, Aymenn Jawad. 2014. "Principles of Administration of the Islamic State." *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/18215/principles-in-the-administration-of-the-islamic>.

⁵⁴ Al-Tamimi, Aymenn Jawad. 2020. "The Islamic State's Real Estate Department: Documents and Analysis." *George Washington University: The ISIS Files*. <https://isisfiles.gwu.edu/concern/reports/8336h188j?locale=en>.

⁵⁵ The ISIS Files 34_001560_01.

⁵⁶ The ISIS Files 34_001560_01.

⁵⁷ See for example: The ISIS Files 07_000531; The ISIS Files 07_000533; The ISIS Files 07_000535; The ISIS Files 07_000538; The ISIS Files 07_000559; The ISIS Files 07_000572; The ISIS Files 07_000586.

⁵⁸ The ISIS Files 07_000537; The ISIS Files 07_000542; The ISIS Files 07_000576; The ISIS Files 07_000600.

⁵⁹ The ISIS Files 07_000553; The ISIS Files 07_000569; The ISIS Files 07_000572; The ISIS Files 07_000573; The ISIS Files 07_000579.

⁶⁰ The ISIS Files 07_000543; The ISIS Files 07_000575; The ISIS Files 07_000577; The ISIS Files 07_000582.

⁶¹ See for example: The ISIS Files 07_000544; The ISIS Files 07_000545; The ISIS Files 07_000547; The ISIS Files 07_000548; The ISIS Files 07_000549; The ISIS Files 07_000552; The ISIS Files 07_000555; The ISIS Files 07_000565.

⁶² The ISIS Files 07_000531.

⁶³ See for example: The ISIS Files 07_000545; The ISIS Files 07_000547; The ISIS Files 07_000548; The ISIS Files 07_000549; The ISIS Files 07_000550; The ISIS Files 07_000552; The ISIS Files 07_000553; The ISIS Files 07_000555; The ISIS Files 07_000559; The ISIS Files 07_000565; The ISIS Files 07_000575.

⁶⁴ The ISIS Files 07_000599; The ISIS Files 07_000600; The ISIS Files 08_000604.

⁶⁵ For example: The ISIS Files 07_000537; The ISIS Files 07_000542.

⁶⁶ Included as The ISIS Files 07_000531 to The ISIS Files 11_000964.

⁶⁷ For example, female farmers and landowners can be found in files: The ISIS Files 35_001606, The ISIS Files 35_001614, The ISIS Files 35_001616, The ISIS Files 35_001621, The ISIS Files 35_001622, The ISIS Files 35_001626, The ISIS Files 35_001627, to name a few. Many of these documents refer to Agrarian Reform Laws from Iraq, specifically Law 35 and Law 117. These laws focused on shifting control of farm lands to different classes. For a more in-depth discussion, please see: Springborg, Robert. "Iraq's Agrarian Infitah." *MERIP Middle East Report*, no. 145, 1987, pp. 16–21. JSTOR, www.jstor.org/stable/3012422.

⁶⁸ The ISIS Files: 10_000760.

⁶⁹ For example: The ISIS Files 07_000541.

⁷⁰ For example: The ISIS Files 08_000644.

⁷¹ For example: The ISIS Files 08_000636.

⁷² In the documents, the Arabic term سقي is used for irrigated land in contrast with the term ديم (used specifically in Iraq for rainfed lands).

⁷³ This process was similar to those found in the Islamic State Department of Real Estate files. See for example The ISIS Files 34_001560_01, which discussed the mechanisms of taking inventory of the confiscated properties of the Islamic State. These include, 1. Preparing maps of the area to be inventoried. 2. Using professionals or skilled workers to do the inventory of confiscated properties. 3. Carrying out the inventory of properties of the Islamic State ‘the right way.’ 4. Highlighting of properties on the map with different colors, per the color coded system.

⁷⁴ In order to protect the Personally Identifiable Information of local farmers, ID cards and fingerprints were removed.

⁷⁵ The ISIS Files 09_000704. Includes Partnership Agreements #1 & #3.

⁷⁶ For example: The ISIS Files 09_000704.

⁷⁷ A dunam is a measure of land area used in parts of the former Ottoman empire, equal to approximately 900 square meters.

⁷⁸ The ISIS Files 11_000951.

⁷⁹ For example: The ISIS Files 09_000725, The ISIS Files 11_000935, the ISIS Files 11_000927AU, the ISIS Files 08_000654AU, and the ISIS Files 11_000951AU.

⁸⁰ Food and Agriculture Organization of the United Nations. 2016. “Agriculture and Livelihoods Need Assessment. On the Newly Liberated Areas of Kirkuk, Ninewa and Salahadin.”
https://reliefweb.int/sites/reliefweb.int/files/resources/FAO_Assessment1.pdf p. 11.

⁸¹ The ISIS Files File 09_000717.

⁸² The ISIS Files 10_000753.

⁸³ For example, The ISIS Files 08_000682.

⁸⁴ The ISIS Files 08_000682, The ISIS Files 08_000683, and The ISIS Files 08_000681 use the same car (and guarantor) as collateral for deferred payment for three different farmers/land rental agreements.

⁸⁵ Whittington, Ray and Kurt Pany. 2018. *Principles of Auditing & Other Assurance Services 21st Edition*. McGraw Hill

⁸⁶ The ISIS Files 22_001236.

⁸⁷ The ISIS Files 20_001150.

⁸⁸ Files numbered from The ISIS Files 20_001096 through The ISIS Files 22_001236 were found in the briefcase.

⁸⁹ The ISIS Files 20_1105 to 20_1144 (with a few missing or unrelated items).

⁹⁰ The ISIS Files 20_001096; The ISIS Files 20_001101; The ISIS Files 20_001102; The ISIS Files 20_001103; The ISIS Files 20_001104; The ISIS Files 20_001126; The ISIS Files 20_001134; The ISIS Files 20_001136; The ISIS Files 20_001155; The ISIS Files 20_001156; The ISIS Files 20_001167; The ISIS Files 21_001174; The ISIS Files 21_001193; The ISIS Files 22_001211; The ISIS Files 22_001215; The ISIS Files 22_001221; The ISIS Files 22_001222; The ISIS Files 29_001451.

⁹¹ For example: The ISIS Files 20_001161.

⁹² The ISIS Files 20_001168.

⁹³ The ISIS Files 11_000943.

⁹⁴ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 4E: Notice to Service Offices in Hit, Anbar Province. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁹⁵ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 6G: Conditions for travel outside Mosul. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁹⁶ For example: The ISIS Files 29_001447.

⁹⁷ For example: The ISIS Files 35_001625.

⁹⁸ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 11T: Notice to those who own combines, Deir az-Zor Province (2015). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.; Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 11U: Notice to those who own combines (2). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

⁹⁹ The ISIS Files 08_000617

¹⁰⁰ This statement was written into the template of the Partnership Contracts under "conditions of the contract." See for example: The ISIS Files 09_000700, The ISIS Files 35_001610, The ISIS Files 35_001635, The ISIS Files 35_001636.

¹⁰¹ The ISIS Files 35_001606 to The ISIS Files 35_001623.

¹⁰² Similar to Land Rental Agreements, the individuals listed in these documents were predominantly men. However, some women farmers were also listed. For example: The ISIS Files 35_001614, The ISIS Files 35_001615, The ISIS Files 35_001616.

¹⁰³ The ISIS Files 20_001159.

¹⁰⁴ The ISIS Files 07_000592.

¹⁰⁵ The ISIS Files 11_000948.

¹⁰⁶ The ISIS Files 29_001451.

¹⁰⁷ The ISIS Files 35_001629.

¹⁰⁸ The ISIS Files 21_001186 contains one example: “You are summoned to appear at Al-Rabie sector to pay the amount of rent you owe within two days of receipt of notification. If you fail to appear, you will be banned from working in the leased space.”

¹⁰⁹ The ISIS Files 20_001159.

¹¹⁰ The ISIS Files 11_000944.

¹¹¹ The ISIS Files 11_000943.

¹¹² Law 35 and Law 117 are Iraqi agrarian reform laws. These laws focused on shifting control of farm lands to different classes. For a more in-depth discussion, please see: Springborg, Robert. 1987. “Iraq's Agrarian Infitah.” *MERIP Middle East Report*, no. 145, pp. 16–21. JSTOR, www.jstor.org/stable/3012422.

¹¹³ The ISIS Files 11_000943.

¹¹⁴ The ISIS Files 11_000943.

¹¹⁵ The ISIS Files 21_001186.

¹¹⁶ Fick, Maggie and Maha al Dahan, 2014. “Exclusive: Islamic State militants grab new weapon - Iraqi wheat.” *Reuters*. 13 August 2014. <https://www.reuters.com/article/us-iraq-security-islamicstate-wheat/exclusive-islamic-state-militants-grab-new-weapon-iraqi-wheat-idUSKBN0GD14720140813>.

¹¹⁷ Fick, Maggie, 2014. 30 September 2014. “Special Report: Islamic State uses Grain to Tighten Grip in Iraq.” *Reuters*. <https://www.reuters.com/article/us-mideast-crisis-wheat-idUSKCN0HP12J20140930>.

¹¹⁸ Financial Action Task Force (FATF). 2015. “Financing of the Terrorist Organization Islamic State in Iraq and the Levant (ISIL).” *FATF*. <http://www.fatf-gafi.org/media/fatf/documents/reports/Financing-of-the-terrorist-organisation-ISIL.pdf>. p.15

¹¹⁹ Jaafar, Hadi H. and Eckart Woertz. 2016. “Agriculture as a funding source of ISIS: A GIS and remote sensing analysis.” *Food Policy*. Volume 64, 2016, Pages 14-25, <https://doi.org/10.1016/j.foodpol.2016.09.002>. p.16

¹²⁰ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 16Y: Names of farmers who have not planted wheat (Amiriya, Fallujah province). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

¹²¹ Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 18Q: Letter from the Fallujah agriculture centre to the Islamic court (to go with Specimen 16Y). *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

¹²² Al-Tamimi, Aymenn Jawad. 2016. “Archive of Islamic State Administrative Documents.” Specimen 17P: Diwan al-Zara'a card, Fallujah area. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2016/01/archive-of-islamic-state-administrative-documents-1>.

¹²³ Al-Tamimi, Aymenn Jawad. 2016. "Archive of Islamic State Administrative Documents." Specimen 26C: Sack issued by the Diwan al-Zara'a (silos and grain manufacturing/flour mills admin), Wilayat Ninawa. *Aymenn Jawad Al-Tamimi's Blog*, <http://www.aymennjawad.org/2016/09/archive-of-islamic-state-administrative-documents-2>; Al-Tamimi, Aymenn Jawad. 2016. "Archive of Islamic State Administrative Documents." Specimen 29Z: Flour sacks, Shirqat (Wilayat Ninawa label). *Aymenn Jawad Al-Tamimi's Blog*, <http://www.aymennjawad.org/2016/09/archive-of-islamic-state-administrative-documents-2>; Al-Tamimi, Aymenn Jawad. 2016. "Archive of Islamic State Administrative Documents." Specimen 30A: Flour sacks, Tikrit area (Wilayat Salah al-Din label). *Aymenn Jawad Al-Tamimi's Blog*, <http://www.aymennjawad.org/2016/09/archive-of-islamic-state-administrative-documents-2>.

¹²⁴ The ISIS Files 02_000272.

¹²⁵ The ISIS Files 11_000879.

¹²⁶ The ISIS Files 01_000224.

¹²⁷ The ISIS Files 36_001651.

¹²⁸ The ISIS Files 01_000228.

¹²⁹ The ISIS Files 20_001096.

¹³⁰ We use the exchange rate as of 01/05/21. Exchange rate: 0.000692 IQDUSD (1 Iraqi Dinar = 0.000692 US Dollars). Average monthly IQDUSD volatility (07/2014 to 06/2021): 0.24%. Estimation based on data from www.investing.com

¹³¹ The ISIS Files 20_001157, document titled "Participation in tender" (page 12).

¹³² Joumah, K. 4 June 2015. "Let them Eat Bread: Extremists in Mosul Ban Grain Exports, Ensure Food Security Niqash." (Republished in Iraq Business News. <https://www.iraq-businessnews.com/2015/06/07/is-bans-grain-exports/>); Al-Tamimi, Aymenn Jawad. 22 April 2016. "A Caliphate under Strain: The Documentary Evidence." *CTC Sentinel*. <https://www.ctc.usma.edu/a-caliphate-under-strain-the-documentary-evidence/>.

¹³³ The ISIS Files 20_001162.

¹³⁴ The ISIS Files 20_001157.

¹³⁵ The ISIS Files 20_001157.

¹³⁶ The ISIS Files 20_001157.

¹³⁷ Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimens 3K: Fatwa on Eating Meats Imported from Turkey. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>; Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimens 4X: Ban on Importing Iranian Food and Medical Goods. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>; Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 5Y: Reiteration on Ban on Importing Iranian Food and Medical Goods, Ramadan 1436 AH, Diwan al-Hisbah. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

¹³⁸ The ISIS Files 20_001157.

¹³⁹ The ISIS Files 20_001157.

¹⁴⁰Al-Tamimi, Aymenn Jawad. 2015. "Archive of Islamic State Administrative Documents." Specimen 10V: Prices of bread, northern Deir az-Zor province. *Aymenn Jawad Al-Tamimi's Blog*, <https://www.aymennjawad.org/2015/01/archive-of-islamic-state-administrative-documents>.

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¹⁴² Bashar, Muhammad Lawal Ahmad. 1997. "Price Controls in an Islamic Economy." *Journal of King Abdulaziz University: Islamic Economics, King Abdulaziz University, Islamic Economics Institute.*, vol. 91. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3125995 p. 29-52

¹⁴³ Barnard, Anne, and Hwaida Saad. 2015. "ISIS Alternates Stick and Carrot to Control Palmyra." *New York Times*. 23 May 2015. http://www.nytimes.com/2015/05/29/world/middleeast/isis-alternates-stick-and-carrot-to-control-palmyra.html?_r=0 .

¹⁴⁴ Al-Tamimi Aymenn Jawad. 11 March 2014. "The Dawn of the Islamic State of Iraq and ash-Sham." *Hudson Institute*. <https://www.hudson.org/research/10169-the-dawn-of-the-islamic-state-of-iraq-and-ash-sham>.

¹⁴⁵Jaafar, Hadi H. And Eckart Woertz. 2016. "Agriculture as a funding source of ISIS: A GIS and remote sensing analysis." *Food Policy*. Volume 64, 2016, Pages 14-25, <https://doi.org/10.1016/j.foodpol.2016.09.002>. p.16

¹⁴⁶ All documents are contained in: The ISIS Files 20_001157.

¹⁴⁷ The entire file, The ISIS Files 20_001157.

¹⁴⁸ Food and Agriculture Organization of the United Nations. 2016. "Agriculture and Livelihoods Need Assessment. On the Newly Liberated Areas of Kirkuk, Ninewa and Salahadin." https://reliefweb.int/sites/reliefweb.int/files/resources/FAO_Assessment1.pdf. p. 22.

¹⁴⁹ Reno, William. 2015. "Predatory Rebellions and Governance: The National Patriotic Front of Liberia, 1989–1992." In Arjona, Ana, Nelson Kasfir, and Zachariah Mampilly (Eds.). 2015. *Rebel Governance in Civil War*. Cambridge University Press. p. 269

¹⁵⁰ Becker Aarseth, Mathilde. Forthcoming 2021. *Mosul under ISIS: Eyewitness accounts of life in the caliphate*. London: I.B. Tauris.