Global histories
a student journal

Envisioning (In)dependent Filastin: Agrochemicals and the Synthetic Age in British-Ruled Palestine

Omri Polatsek

DOI: http://dx.doi.org/10.17169/GHSJ.2021.423

Source: Global Histories, Vol. 7, No. 1 (May 2021), pp. 56-88.
ISSN: 2366-780X

Publisher information:
'Global Histories: A Student Journal' is an open-access bi-annual journal founded in 2015 by students of the M.A. program Global History at Freie Universität Berlin and Humboldt-Universität zu Berlin. 'Global Histories' is published by an editorial board of Global History students in association with the Freie Universität Berlin.

Freie Universität Berlin
Global Histories: A Student Journal
Friedrich-Meinecke-Institut
Koserstraße 20
14195 Berlin

Contact information:
For more information, please consult our website www.globalhistories.com or contact the editor at:
admin@globalhistories.com.

Envisioning (In)dependent Filastin: Agrochemicals and the Synthetic Age in British-Ruled Palestine

by
OMRI POLATSEK

ABSTRACT

By reconstructing the history of Imperial Chemical Industries Levant activities and examining Husni al-Miqdadi's writings (one of ICI Levant's agents), this article explores the crystallization of the Synthetic Age in British-ruled Palestine. As ICI Levant was the leading local importer of agrochemicals to Palestine, it held a significant position for Zionist-Jews and Arab-Palestinians, both seeking to transform the economic basis of the land in order to materialize a future national economy that would be based on agriculture. After describing the interdependence between the Synthetic Age and British Imperialism in the first section, the article depicts the company's local and regional activity and explores Arab-Palestinians reaction to its expansion in the second and third sections. In the last section, it studies the activities and writings of one of the company's agents, Husni al-Miqdadi (المقدادي). Reconstructing al-Miqdadi's work vis-à-vis ICI's local and regional activity reveals the material and social entanglements between the national-local and imperial-global, resulting from the new 'chemical possibilities' generated by British Imperialism. This article argues that al-Miqdadi's specific expertise as a fertilizer expert was a product of a substantial change that took place during the interwar period– the rising flow of synthetic agrochemicals to Palestine and the Middle East. As the Synthetic Age was set into motion by imperial infrastructure and colonial mindsets, its material and conceptual aspects shaped the interactions between local and imperial actors and enabled experts like al-Miqdadi to join in and expand the discourse of Arab-Palestinian *nahda*.

ABOUT THE AUTHOR

Omri Polatsek is an MA student at the Middle Eastern and African History department at Tel Aviv University. Currently, he is a visiting student at the Global History Department at Freie Universität Berlin. Omri's master thesis explores the history of synthetic agrochemicals in British-ruled Palestine, focusing on the role of 'chemical agents' (companies, chemists, and double-potential chemical substances) in shaping changing ideas and material transformations.

INTRODUCTION

On an early morning in January 1946, eight armed men and women broke into the offices of Imperial Chemical Industries Levant at Salame Road, Tel Aviv. The single guard was no match for this trained group. As he was chloroformed and tied, other team members spread pepper across the floor in order to prevent the police dogs from tracing their scent. The group quickly left, carrying ten tons of sodium nitrate in two unidentified trucks.[1] This meticulously planned robbery was not the only one taking place after the Second World War in British-ruled Palestine, however. A more peculiar case happened a few months earlier at Haifa, when in November 1945, an unknown man arrived at the warehouses of Imperial Chemical Industries Levant enquiring about goods he claimed he had to transport. After presenting himself as a representative of Hebron municipality and showing the guard his certificates, the local official gave him five tons of sodium nitrate.[2]

"How is it possible?" wondered a correspondent from *Filastin*, a Jaffa based Arab-Palestinian newspaper, that "the agent of the department gave this huge quantity [of sodium nitrate] to this Jewish man, while [previously] he did not want to give the officials from Hebron Municipality 150 kilograms of sodium nitrate without a police escort?"[3] Typically, the transportation of hazardous chemical substances in Palestine was accompanied by police or army forces. The writer explained that previously, when representatives of Hebron municipality picked up sodium nitrate from the harbor, they had to wait until the arrival of 11 armed soldiers to escort them back to Hebron. The *Filastin* correspondent was dumbfounded by the company's naiveté and speculated whether there were any other motives beyond it.[4]

This article will set out to explore Imperial Chemical Industries Levant, the company that lost dozens of synthetic chemicals in 1946, and one of its Arab-Palestinian agents.[5] During the interwar period, Imperial Chemical Industries was working on a global scale, setting up branches all over the British empire and selling its products worldwide.[6] In the Middle East, the company's main branches were in British-ruled Palestine. The

1 "Jews Raid Store," *The Scotsman*, 16 January 1946; "Shod 10 ton natran hankati" ["Ten Tons of Sodium Nitrate Stolen"] *Ha'aretz*, 16 January 1946.

2 "5 ton homrey-nefets huts'au bemirma?" ["Five Tons of Explosives Taken in Deceit?"] *Ha'aretz*, 03 December 1945; "Mehapsim 5 ton homrey-nefets" ["Searching for Five Tons of Explosives"] *LaHayal*, 04 December 1945.

3 "Al-'irhabyun al-yahud yakhtalasun 5 atnan mutafajjirat" ["The Jewish Terrorist Stole Five Tons of Explosives"] *Filastin,* 02 December 1945.

4 *Filastin,* 02 December 1945.

5 Hereafter: ICI Levant.

6 Hereafter: ICI (referring to the mother company in London).

company's personnel, products, and ideas were prevalent in Palestine during a specific historical moment when synthetic chemicals became common both for domestic and industrial usages. In the agricultural realm, this moment during the interwar period marked a shift towards a mounting application of synthetically made fertilizers, pesticides, and herbicides.[7]

As this article will seek to demonstrate, Husni al-Miqdadi (المقدادي), who was working for the company as a consultant and sales agent, was well-aware of the possibilities generated from ICI's chemical products. As a fertilizer specialist, he was informed of the potential for agrochemicals to enhance the economic value extracted from orange cultivation—Palestine's most lucrative export crop. From his 'expert' position, al-Miqdadi sought to contribute to the prevalent national economic-awakening discourse. By focusing on al-Miqdadi's work vis-à-vis the company's regional activity, this study will highlight the material and social entanglements between the national-local and imperial-global, which resulted from the new 'chemical possibilities' generated by British imperialism between both world wars.

While in the case of these two robberies, the synthetic fertilizers were most likely used by the Jewish anti-imperial forces to blow up British infrastructure, their original role was to nourish various fields and orchards in Palestine. In 1946, at the time of these robberies, synthetic fertilizers were often employed in intensive 'modern' agriculture schemes and used in various cultivation fields in British-ruled Palestine, the British empire, and around the world.[8] While the consumption of synthetic agrochemicals outside of Europe and North America was gradually spreading through the interwar period, the history of this agricultural-industrial transformation remains unresearched. Historical accounts on synthetic fertilizers and pesticides are centered around North America and Western Europe.[9]

7 Edward Melillo, "The First Green Revolution: Debt Peonage and the Making of the Nitrogen Fertilizers Trade, 1840-1930," *The American Historical Review* 117, no. 4 (2012): 1053-56, https://doi.org/10.1093/ahr/117.4.1028; Edmund Russell, *War and Nature: Fighting Humans and Insects with chemicals from World War I to Silent Spring* (Cambridge: Cambridge University Press, 2001), 53-73.

8 Corey Ross, *Ecology and Power in the Age of Empire: Europe and the Transformation of the Tropical World* (Oxford: Oxford University Press, 2017).

9 Vaclav Smil, *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production* (Cambridge, MA: The MIT Press, 2000); David Kinkela, *DDT & The American Century: Global Health, Environmental Politics and the Pesticide that Change the World* (Chapel Hill, NC: University of North Carolina Press, 2011); Russell, *War and Nature*. Historical scholarship on

Likewise, conventional histories of chemical infrastructure were written solemnly through nation-centered and comparative national history paradigms, dealing primarily with industries located in the Euro-American metropoles.[10] As a result, while the emerging ties between imperial states and chemical companies during the interwar period has been accounted for, the consequences of this collaboration overseas has been completely neglected.[11] The historiography on chemical companies and synthetic agrochemicals do not consider the fact that the global change in production, circulation, and usages of synthetic substances was also based on imperial infrastructure and colonial networks. Who were the actors behind the flow of agrochemicals from the laboratory to the field and from the factory to the orchard? How did chemical companies interweave their overseas activities into the imperial apparatus? How did the possibilities generated by synthetic chemicals and imperial infrastructure shape local agents' visions and imaginations? This article will attempt to fill this historiographical gap by answering these questions, focusing on ICI Levant's operations and personnel in British-ruled Palestine.

organic fertilizers focuses on Latin America. For example, see Melillo, "The First Green Revolution"; Gregory Cushman, *Guano and the Opening of the Pacific World: A Global Ecological History* (Cambridge: Cambridge University Press, 2013).

10 Monica J. Casper, "Introduction: Chemical Matters," in *Synthetic Planet: Chemical Politics and the Hazards of Modern* Life (New York: Routledge, 2003), xv-xvi; on the chemical industry in North America and its relations to nationalism see Kathryn Steen, *The American Synthetic Organic Chemicals Industry: War and Politics, 1910-1930* (Chapel Hill, NC: University of North Carolina Press, 2014); on the German chemical industry and its relationship with the state (and to two world wars) see Diarmuid Jeffreys, *Hell's Cartel: IG Farben and the Making of Hitler's War Machine* (London: Bloomsbury, 2009); for the British government's close ties with the chemical industry see Arnaud Page, "'The Greatest Victory which the Chemist had Won in the Fight (...) Against Nature': Nitrogenous Fertilizers in Great Britain and the British Empire, 1910s-1950s," *History of Science*, 54, no. 4 (2016): 383-398, https://doi.org/10.1177/0073275316681801; on the British chemical industry see W.J. Reader, *Imperial Chemical Industries: A History Vol. II* (London: Oxford University Press, 1970), 32-46, 318-364. Middle East historians who research chemical industries are mostly focused on oil. For example, see Robert Vitalis, *America's Kingdom: Mythmaking on the Saudi Oil Frontier* (Stanford, CA: Stanford University Press, 2006); Katayoun Shafiee, *Machineries of Oil: An Infrastructural History of BP in Iran (*Cambridge, MA: The MIT Press, 2018*);* Timothy Mitchell*, Carbon Democracy: Political Power in the Age of Oil* (New York: Verso, 2011).

11 For examples in Germany and the British Empire, see Jeffreys, *Hell's Cartel*; Page, "Nitrogenous Fertilizers in Great Britain and the British Empire".

Starting from the 1920s, Western experts had started to address this industrial transformation and applauded the potential of 'unlimited' usage of man-made chemical substances by articulating their current era as the *Synthetic Age*.[12] This expression has been used in the context of various interactions between humans and synthetics ever since.[13] Recently, the term has been remodeled by Mortiz von Brescius as a conceptual framework. He employs the term to explore the expectations and anticipations stimulated by chemical science and synthetic substances from the 1830s onwards.[14] Exploring al-Miqdadi's professional life and writings, this article will extend von Brescius' conceptualization of the Synthetic Age, not in time but in space, in order to include non-Western "horizons of expectations" conceived from the new potentials of synthetic chemistry.[15] Furthermore, this spatial sway from previous and contemporary articulations of the Synthetic Age will allow me to inject it with new analytical vigor. As a structural framework it will also serve here as a first step to revealing the synthetic-chemical dependent agricultural-industrial transformation that was taking place in Palestine during the interwar period more broadly. Thus, the Synthetic Age will point to the cross-fertilization between the intellectual and material dimensions of the mass production, circulation, and usages of synthetic chemicals around the British empire. By focusing on ICI as an 'intermediate' between the local and the global, this article intends to demonstrate that the Synthetic Age was gradually materializing outside of the 'West' as it was set into motion by imperial infrastructure and colonial mindsets. In this historical moment, the company took an active part in the industrial-agricultural transformation in British-ruled Palestine. The material and conceptual aspects of the Synthetic Age enabled experts like al-Miqdadi to join in and expand the discourse of national economic Arab-Palestinian independence.

This article has four sections. In the first part, I will provide an account of the Synthetic Age's global dimensions and highlight the British empire's role in setting the Synthetic Age into motion outside of Europe and North America. Against this structural backdrop, the second section will demonstrate that Imperial Chemical Industries Levant, ICI's regional sub-company, served as an intermediate by connecting British chemical factories and laboratories to Palestinian and regional cultivation

12 Edward D. Melillo, "Global Entomologies: Insects, Empires, and the 'Synthetic Age' in World History," *Past and Present* 223 (May 2014): 257-260, https://doi.org/10.1093/pastj/gtt026.

13 Melillo, "Global Entomologies," 257-260.

14 Universität Bern, Historisches Institut, Dr. Moritz von Brescius, accessed 03 May 2021, https://www.hist.unibe.ch/ueber_uns/personen/von_brescius_moritz/index_ger.html.

15 This term is taken from von Brescius.

fields. By focusing on the company's activity, I suggest that the Synthetic Age materialized in relation to, and as a consequence of, British imperialism in the Middle East. In the third section, I will zoom in on the relationship between ICI Levant and the Arab-Palestinian middle-class by analyzing newspaper coverage on the company's activities. In doing so, I will demonstrate that this conversation was part of a broader discussion taking place in British-ruled Palestine about 'economy-making' and national independence. In the fourth and last section, I will focus on al-Miqdadi's work. As mentioned before, al-Miqdadi sought to contribute to the prevalent discourse of Arab-Palestinian 'economy-making' with his specific chemical-agricultural expertise. Furthermore, his writings reveal another aspect of this economic vision, as they were part of a broader intellectual discourse which sought to animate an Arab economic *nahda* (النهضة).

THE SYNTHETIC AGE OUTSIDE OF THE 'WEST'

In hindsight, one cannot think about synthetic chemicals without addressing the hazardous aftermaths generated by their mass production and worldwide usage. The global environmental movement, which materialized during the 1960s, led to historical research scrutinizing the dangerous outcomes of mass application of synthetic chemicals. Nonetheless, those works, which mainly focus on pesticides and other toxic chemicals, are limited chronologically to the 1960s onwards. As Timothy Mitchell has shown, the excessive consumption of synthetics had caused troubles much earlier. In Mitchell's famous account *Can the Mosquito Speak?*, the mosquitoes were only one aspect leading to the death of tens of thousands of Egyptians in 1944.[16] As the Nile Valley could not quench its thirst for ammonium nitrate, the dependence of Egypt's agricultural cultivation on synthetic fertilizers caused a major food crisis when the import of these fertilizers came to a halt during World War II.[17] This 'chemical addiction' was a symptom of a growing dependency on synthetic chemicals outside of Europe and North America. This points to the spatial expansion of the global Synthetic Age outside of the chemical metropolises, which were located in the US, Britain, and Germany.

Since the interwar period, the mass-production of synthetic chemical substances[18] came to play a major role in the making of economies and nations.[19] As

16 Timothy Mitchell, *Rule of Experts: Egypt, Techno-politics, Modernity* (Berkeley, CA: University of California Press, 2002), 19-53.
17 Mitchell, *Rule of Experts*, 25.
18 Pharmaceuticals, dyes, fertilizers, and explosives.
19 David Edgerton, *The Shock of the Old: Technology and Global History since 1900* (London: Profile Books, 2006), 119-122.

noted earlier, the emerging ties between imperial states and chemical companies led to the growing importance of chemists and chemistry as a part of the state apparatus.[20] From an imperial perspective, establishing various chemical industries outside of the British islands was considered a project equally as crucial as other infrastructural schemes of 'high-modernism', such as ports, train rails, dams, and electrical systems.[21] As the Synthetic Age took shape in the colonial space, functioning (Petro-) chemical industries increasingly became an imperative for executing British development policy around the empire.

The Synthetic Age overseas, however, was not limited to the establishment of new chemical factories alone. As the colonial spaces served as a captive market for British manufactured goods, British-made chemicals flowed throughout the globe, arriving at the various colonies and protectorates. Outside of the British isles, the British empire's infrastructure and its preferential tariffs contributed to the circulation of synthetic chemicals. New industrial technologies developed during the First World War had made chemical substances available and necessary to various industrial mass-productions.[22] In the colonial space, this translated both to a growing dependency on synthetic (agro) chemicals and the establishment of chemical factories. For example, the two main development projects of British rule in Palestine, the Haifa Harbor and the Dead Sea industries, were, in fact, dependent on imported chemical substances. The explosives that were reshaping the harbor were ignited by chemicals made in Britain, and the mass production of potash, bromine, and other chemical substances at the Dead Sea was dependent on the importation of other chemicals.[23] Furthermore,

20 In this context Fritz Haber and Carl Bosch, the German chemists and industrialists, come to mind. Their mutual work on nitrogen fixation led to the mass production of ammonia during WWI. This chemical technique is mostly known today as the Haber-Bosch process. After the war, industrialists and chemists were in a close relationship with the state, which culminated once again with IG Farben's intimate collaboration with the Nazi regime. In the British-Jewish context, Alfred Mond and Chaim Weizmann, who will be introduced in the next sections, were both chemists and industrialists. Both also held prominent social and economic positions between London and Jerusalem.

21 Robert Vitalis, *When Capitalists Collide: Business Conflict and the End of Empire in Egypt (*Berkeley, CA: University of California Press, 1995), 78-80; Jacob Norris, *Land of Progress: Palestine in the Age of Colonial Development, 1905-1948* (Oxford: Oxford University Press, 2013), 100-110, 139-142.

22 Roy MacLeod and Jeffrey Johnson, eds., *Frontline and Factory: Comparative Perspectives on the Chemical Industry at War 1914- 1924* (New York: Springer, 2006).

23 For the British manufactured

during the interwar period, the continuous distribution of synthetic chemicals was fundamental to the mechanization and industrialization of the colonized states (cultivating more crops, fighting pesticides, producing minerals).[24] Therefore, there is reason to argue that the global history of the Synthetic Age was set into motion by imperial infrastructure and colonial mindsets.

British-ruled Palestine provides a suitable case for this local unfolding of a global phenomenon. During this period British policymakers, Arab-Palestinian capitalists, and Jewish experts sought to transform the economic basis of the land and to 'develop' the Palestinian economy via agriculture, industry, and commerce. While the British colonial administrators were guided by imperial economic interests, the Arab-Palestinians and Zionist-Jews strove to create and bolster their own national economies while linking them to the regional and imperial markets based on the empire's infrastructure.[25] For these various actors, Palestine offered an economy that would be based on agriculture and minerals.[26] As

explosives, see letter from Chillik Weizmann to Chaim Weizmann, 28/01/1930, 14-1363, Weizmann Archives (hereafter: WA); the Chemical industry at the Dead Sea imported chlorine from France and Britain until the eruption of WWI. It was used for bromine production, which had strategic importance for the British during the war. See Moshe Novomeysky, "Palestine Potash LTD: A Potential Producer of Some Chemicals Needed by Palestine, Dominions, and/or The U.K.", ת-5061/16, Israel State Archives (hereafter: ISA). During the war chlorine was produced at a new factory, which was funded by the British government, at the Dead Sea industrial complex. Most of the sulfur used for chlorine production came from Gaza sulfur quarries. The massive production of chlorine during the war might have caused the depletion of the sulfur from Gaza, as the 'Gaza Quarries Ltd' did not last long after the war had ended. In addition, as Moshe Novomeysky, entrepreneur of the Dead Sea industries, mentioned in the memorandum quoted above, the chlorine could be used as 'military poison gas'. While usually WWI is remembered as the war where chemical warfare was most prevalent in the battlefield, articles from that period mention a "British poison gas made in Palestine" that was used to attack Nazi soldiers. See "British Poison Gas Made in Palestine," *The Sunday Post*, 17 December 1939.

24 Ross, *Ecology and Power in the Age of Empire,* 282-291.

25 For British interest in Palestine see Jacob Norris, *Land of Progress*; Sherene Seikaly's 'men of capital' used their economic journal to conceptualize a regional economy. Sherene Seikaly, *Men of Capital: Scarcity and Economy in Mandate Palestine* (Stanford, CA: Stanford University Press, 2016); for the Jewish articulation of regional economy see the many issues of *Palestine and Middle East: Economic Magazine*, Tel Aviv, Mishar veta'asia co., 1926-1945.

26 This conception was shared by the British, Zionist-Jews, and Arab-Palestinians, and also by other

agrochemicals became synonymous with 'modern agriculture,'[27] and chemical industries became an imperative in the colonies, global chemical companies thus used the novel global order after World War I to expand their operations.[28]

A CHEMICAL IMPERIAL INDUSTRY IN BRITISH-RULED PALESTINE

One major chemical actor, operating both on local and global scales, was Imperial Chemical Industries. The company was established in Great Britain in 1926, when four British chemical companies joined their business operations with the support of the British government in order to establish synthetic nitrogen factories.[29] Through the years, ICI absorbed other chemical companies and expanded its production to various chemical products. The infrastructure of the British empire and its preferential tariffs helped the company to expand its operations to most of the British colonies overseas.[30] If Barclays Bank was the bank of the empire, supplying capital for undertakings in the colonies, then ICI can be conceptualized as the chemical company of the empire, supplying various industries overseas with synthetic and organic chemical substances. In fact, ICI was one of the biggest companies for chemicals on earth until it began to sell its assets in the late 1990s to early 2000s, and was finally taken over by another major chemical company in 2008.[31]

Following the British occupation of new territories after World War I, and after the formation and ratification of the mandates system, the company established several branches in the Middle East. For this purpose, two sub-companies were founded– ICI Egypt and ICI Levant. Whereas the first branch operated only in Egypt, the second, which was established in 1928, administered the company's activities in Palestine, Syria, Iraq, Lebanon, Turkey, and Cyprus.[32] These

commentators. For an American example see Frank Adams, "Palestine Agriculture," *The Annals of the American Academy of Political and Social Science* 164 (1932): 72-83, https://doi.org/10.1177/000271623216400111.

27 Edward Melillo, "The First Green Revolution," 1031-1034.

28 W.J. Reader, *Imperial Chemical Industries: A History. Vol. I: The Forerunners 1870-1926* (London: Oxford University Press, 1970), 317-328, 394-413.

29 Reader, *Imperial Chemical Industries: A History. Vol. II*, 1-12.

30 D.W.F Hardie, *A History of the Modern British Chemical Industry* (Oxford: Pergamon Press, 1966), 300.

31 "Unsticking ICI," *The Economist*, 11 August 2007, accessed: 03 May 2021, https://www.economist.com/business/2007/08/09/unsticking-ici.

32 Page, "Nitrogenous Fertilizers in Great Britain and the British Empire," 391; on the Egyptian branch see Robert Vitalis, *When Capitalists Collide: Business Conflict and the End of Empire in Egypt* (Berkeley, CA: University of California Press,

branches worked together under the mother company of ICI in London.[33] By 1931, the Jewish press celebrated the company's early success both in Palestine and throughout the region, and highlighted Chillik Weizmann's crucial role in it.[34] Yechiel (Chillik) Weizmann was the first manager of ICI Levant and the younger brother of Chaim Weizmann, who headed the World Zionist Organization.[35] In Palestine, Chillik Weizmann was the trusted right hand man for Alfred Mond, who was himself the head of ICI's mother branch in London.

Weizmann was replaced in 1936 by J. B. Mackie. At his inauguration ceremony, Mackie gave a speech in which he articulated the newly local industrial dependence on the flow of global chemical substances to Palestine. While it is safe to assume that he was advocating for the usage of his own company's products, Mackie was also pinpointing the transformation in the global industrial consumption of synthetic chemical substances:

> "It is a truism that chemicals form the foundation of modern industry. There is scarcely any form of industrial activity that is not dependent on a very large extent in an assured supply of chemicals on whose quality and reliability complete confidence can be placed."[36]

This change was also noticed a few years before. In 1933, the *Sheffield Independent*, a northern England daily newspaper, was astonished by the 'striking development' of Palestine's industries, linking it to ICI's products and to the British chemical colonial enterprise.[37] Reporting from ICI Levant's pavilion at the Anglo-Palestinian Expo at Tel Aviv, the paper elaborated on the local usages of British manufactured chemicals:

> "There are shown specimens of wheat grown with English

1995), 78-80. Vitalis reviews the Egyptian government and Egyptian capitalists' negotiations with ICI on the establishment of a new hydroelectrical powerplant which would produce fertilizers.

33 Letter from I. Melamed to Chief Secretary, Government of Palestine, 'Telephone Facilities – Baghdad and Cairo', 22 December 1942, ת-114/32, ISA.

34 "I.C.I Be'erets-israel" ["ICI in Eretz Israel"] *Doar Hayom*, 01 May 1931.

35 Like Alfred Mond, who will be introduced shortly, Chaim Weizmann was also an industrial chemist. He gained his fame and capital helping the British during WWI with the mass production of war chemicals from starch. One American-Jewish newspaper even remarked that "[t]he 1917 Balfour Declaration derived partly from Weizmann's science." See "A Scientist-Statesman," *The Reform Advocate,* 26 January 1940. This goes to further highlight the role of chemists in the service of the state/imperial apparatus during the interwar period.

36 "British Chemicals in Our Industry," *The Palestine Post*, 29 May 1936.

37 "Striking Example of I.C.I.'s Enterprise," *Sheffield Independent*, 09 June 1933.

FIGURE 1: CI Levant's brochure at the Levant Fair (between 1932-36). "Levant Fair. Official Publications," V 3090/43, The National Library of Israel.

FIGURE 2: "Great Britain consumes 85% percent of your oranges- buy British fertilizers." "Be sure that the British fertilizers are the finest." *Al-Iqtisadat al-'arabiyya I*(14), 15 July 1935. Jrayed Collection: Arabic Newspapers of Ottoman and Mandatory Palestine, jrayed.nli.org.il, founded by the National Library of Israel.

> fertilizers by Syrian Sheiks; the King David Hotel at Jerusalem decorated with the paints made at Slough; different qualities of soap made in Palestine with English chemicals [...]; buses in Tel Aviv upholstered in Rexine; where, also, baking powder is already being made from English ingredients."[38]

Three years later at the Levant Fair (another commercial exhibition), *Palestine Post's* correspondent also pointed to the many usages of British chemicals in the local economy as he was reporting from the ICI Levant pavilion. From his account, the large degree to which chemical substances played a crucial role in agricultural and industrial schemes is evident. As he described:

38 Ibid.

> "A striking colored chart in the center of the exhibit shows the industrial uses to which ICI chemicals are put in Palestine. They play a prominent part in the making of food, drink, tabaco products, textiles, metals, engineering and electrical equipment, leather, chemicals and dyes, paint and paper, bricks, pottery and glass, and oils and soap, as well as in agricultural production."[39]

Right from its onset, ICI Levant published commercials in Hebrew, English, and Arabic, urging readers to buy the company's products.[40] In addition to plain text boxes describing its wares as shown in Figure 1, other lively advertisements displayed the new relationship between British synthetic chemicals and the agriculture of Palestine. Figure 2 is taken from the front page of *Al-Iqtisadat al-'arabiyya* (The Arab Economic Journal), an Arab-Palestinian economic periodical. Portrayed on the left side is the British industrialist who loads the ship with British fertilizers, which travel to Haifa's harbor. Returning to the British isles are marching boxes marked with dollar signs. While they are not visible, we can speculate that these boxes are filled with packed oranges.[41] This advertisement hints at the novelty of synthetic chemicals in Palestine, as it captures a historical moment in which the Synthetic Age came into materialization in the Middle East and vividly illustrates the imperial flow of synthetic chemicals. Here ICI Levant serves as an 'intermediate,' which drew British-ruled Palestine into global-imperial chemical networks.

In addition to the products mentioned above, ICI Levant sold other chemical novelties. During the 1930s, the company was importing various chemical substances to Palestine, including different kinds of fertilizers, weapons, explosives, and dyes.[42] In the early 1940s, one could find ICI Levant's pesticides and herbicides at various Arab-Palestinian dealers in Haifa, Jerusalem, Ramallah, Gaza, Jenin, Acre, Nazareth, Bethlehem, Jaffa, and Tiberias and Tulkarem.[43] In addition, during the Second World War, the Palestinian government appointed it almost exclusively to be in charge of the importation of chemical fertilizers to the country,[44] thus making the

39 "At the Levant Fair," *The Palestine Post* 01 June 1936.

40 For English, see *The Palestine Post*, 10 January 1945; *The Palestine Post*, 21 June 1935; *Al-Carmel*, 31 August 1932; *Al-Carmel*, 11 November 1933. And many more in the following newspapers: *Filastin*, *Al-Sirat*, *Al-Carmel*, *Al-Jami'a al-'arabiyya* and *Al-Iqtisadat al-'arabiyya*.

41 *Al-Iqtisadat al-'arabiyya* I (14), 15 July 1935.

42 Ta'asiyot Himi'yot Mamlahti'yot (Levant ba'am), Yafo: Dfus M. Shoham, unknown year.

43 Plant Protection Services, Jerusalem, 02 March 1942, ג-634/9, ISA.

44 Letter from Controller of Agricultural Production to Chief Secretary, Government of Palestine, 24/02/1945,

company the largest importer of agrochemicals to Palestine.[45]

ICI Levant did not only sell various chemical substances– its experts were also involved with the local field of agricultural experimentation. Fertilizers produced by ICI were used in various agricultural stations all over Palestine, and its synthetic pesticides were used to control different pests. For instance, Jewish farmers reported back to ICI Levant on the results of their fumigation efforts against black scales and hornets,[46] and locust attacks in Palestine were pushed back with synthetic pesticides produced by ICI.[47] The massive campaign against locusts held all over the Middle East during the Second World War was dependent on a new pesticide, Gammaxene, which was invented in ICI laboratories in England.[48] In short, whether in the field experiment station or during a committee meeting discussing plant protection,[49] the company held intimate ties with both Jewish and British agricultural experts.

Since synthetic fertilizers and other chemicals were relatively new and were in constant development, ICI Levant took it upon itself to 'educate' local farmers on using its products. As mentioned in its brochure, it was in fact the company's trademark to provide free expert assistance.[50] For example, experts sent by the company to Tulkarem in 1930 had demonstrated to the local farmers how to use the fertilizers.[51] Furthermore, one of the first actions taken by the company right after hiring sales representatives was to schedule expert lectures, as indicated by its agent visit to Jenin in 1931.[52] ICI Levant's agrarian methods in Palestine corresponded with similar attempts of ICI's Indian branch to 'educate' farmers in the provinces of Bombay, Bihar, and Sind on synthetic

ת-68.44, ISA.

45 'Agricultural Chemicals and Fertilizers-Monthly Report of Stocks,' 1942, ת-4894/3, ISA.

46 See various letters in folder number J15-13330-3, Zionist Archives.

47 'Locust Campaign – 1947: Situation, Measures Taken and Preparations in Hand,' 17/02/1947. ת-18/37 ,ISA.

48 *The Palestine Post*, 19/10/1945; an ICI publication about its chemical inventions that took place in Jealott's Hill in North England mentioned Gammaxene together with DDT as sharing the same "credit for the dawn of a new era of insect control in agriculture, horticulture, stored products, timber preservations and public health." F. C. Peacock, *Jealott's Hill: Fifty Years of Agricultural Research, 1928-1978* (Bracknell: Imperial Chemical Industries, Plant Protection Division, 1978), 6.

49 Minutes of the 11th Meeting of the Plant Protection Committee held on 13 April 1938. ת-664/6, ISA.

50 Ta'asiyot Himi'yot Mamlahti'yot (Levant ba'am), Yafo: Dfus M. Shoham, unknown year.

51 "Al-sana'at al-kimawiyya al-'imbartaturiyya w'al-da'wa al-sahyunyya" ["Imperial Chemical Industries and the Zionist Propaganda"] *Filastin*, 30 December 1930.

52 "Asabi'a miltshit fi jenin" ["The Fingers of Meltchett in Jenin"] *Filastin*, 14 January 1931.

chemical usages.[53] These agricultural policies reflect the close relationship between the imperial apparatus and the empire's chemical industries. In the case of agrochemicals, British imperial initiatives to 'develop' the indigenous rural community via modern agricultural schemes, and private (imperial) business aiming at selling its products, were animating each other. Thus, the Synthetic Age cannot be understood without both forces, which attempted to provoke a global change in synthetic agrochemical consumption.

The links between colonial agricultural policies and ICI activities in the field of agriculture reveal a staggering connectivity between chemical industries, imperial infrastructure, and colonial-agricultural science.[54] Exposing these connections, however, is only possible by focusing on the company and its chemical substances. Unpacking the cross-fertilization between synthetic chemicals and colonial spaces reveals the close ties between chemical industries and colonial sovereignty in a historical moment that was characterized by the rise of synthetic chemicals. Under the global context of the Synthetic Age, ICI Levant's imperial activity can be seen as a catalyst for the spread of synthetic chemicals into colonial spaces. In Palestine, the Synthetic Age materialized in relation to, and as a consequence of, British imperialism in the Middle East.

VISIONS OF A ROUND GOLDEN FUTURE

At the start of 1930, Isa Al-Isa, the editor in chief of *Filastin*, was sued by ICI Levant managers and the Palestinian government for "slanderous and false accusations."[55] The paper accused the company of smuggling weapons. More specifically, the paper proclaimed that "[s]ince ICI handed over the business of explosives to Chillik Weizmann [...], the Zionists are well supplied with bombs and the government does nothing to control it."[56] While in this specific case, the company was accused of arming Zionist-Jews, usually the allegations against ICI Levant were set towards what (some of) the Arab-Palestinian writers believed to be its key ambition–the "extension of the Jewish colonization."[57] The following

53 Page, "Nitrogenous Fertilizers in Great Britain and the British Empire," 392.

54 For colonial efforts around the empire see Ross, *Ecology and Power in the Age of Empire*; for British efforts in British-ruled Palestine see Roza El-Eini, *Mandated Landscapes: British Imperial Rule in Palestine 1929-1948* (London: Routledge, 2006).

55 "Mishpatam shel itonim aravim hane'aeshamim be'hafatsat diba" ["The Trail of Arab Newspapers which are Accused of Defamation"] *Doar Hayom*, 05 March 1930.

56 Letter from Chillik Weizmann to Chaim Weizmann, 28 January 1930, 14-1316, WA.

57 "Al-lurd miltshit w'aghradhu" ["Lord Meltchett and his Goals"] *Filastin*, 12 December 1930.

section will explore the Arab-Palestinian public debate regarding ICI Levant's position in Palestine and will describe the unique role the company had in supporting or hampering the perceived economic-national development.

As two prominent Jewish figures and the leaders of ICI in Britain and Palestine, Chillik Weizmann and Alfred Mond were often targeted by the press. The media was concerned that Mond and his son, Henry Mond (the second Lord Meltchett) would assist the "Zionist colonialization" as they held close connections to British circles in Jerusalem and London.[58] Thus, the press established a link between the Monds' other economic endeavors in Palestine with ICI Levant's undertakings in the region. Consequently, the articles warned against "the economic Jewish colonialization"[59] of Palestine and the company's place in it. Under this light, the company's expansion attempts via its agents to other parts of Palestine and east of the Jordan were observed under suspicion.[60] For instance, the *Filastin* correspondent noted that "[t]he company opened branches in Syria [...] despite the presence of a local Arab agent, who have been conducting business with other British companies."[61] Arriving at the heart of the matter, the writer warned that "if we will not pay attention to [ICI Levant's] broad and extensive operations, which are taking place around us according to their economic plan, they will take over the economy and the industries. Thus, our financial and economic life, which are the basis for our independence, will be under their influence; by not being aware [of their activities], we will help to create the national Jewish homeland unintentionally."[62]

Another theme that emerged from these articles was the lack of ICI Levant's Arab agents and officials in its operations. "If the company's wishes to serve the country and its commerce were true," wrote *Filastin* in 1930, "it would have appointed Arab officials; however, its actions [in the local market] are testifying for its [real intentions]."[63] The newspapers saw the lack of 'Arab hands' in the company lines as another indicator of its "real purposes" mentioned before. While in the aforementioned trial, the company's representative

58 "Al-sana'at al-kimawiyya al-'imbartaturiyya: shariqa yusaytiru alayha al-sahyunyyun " ["Imperial Chemical Industries: A Company Controlled by Zionists"] *Al-Sirat*, 23 November 1930.

59 "Al-sana'at al-kimawiyya al-'imbartaturiyya w'shariqat shel: radd w'bayan" ["Imperial Chemical Industries and Shell Company: Response and Clarification"] *Filastin*, 25 December 1930.

60 *Filastin*, 12 December 1930; *Filastin,* 14 January 1931.

61 "Al-sana'at al-kimawiyya al-'imbartaturiyya: shariqa yusaytiru alayha al-sahyunyyun II " ["Imperial Chemical Industries: A Company Controlled by Zionists II "] *Filastin,* 29 Novermber 1930.

62 Ibid.

63 *Filastin*, 25 December 1930.

testified that "half of the company's officials in Palestine and Syria are Arabs,"[64] other documents from that period attest differently. In a private correspondence between Chaim and Chillik Weizmann in the same year, the latter informed his brother: "Since ICI had established in Palestine all work, sales, agencies, etc. have been done by Jews and through Jews only and it is, therefore, that to all intents and purposes, ICI in Palestine acts like a Jewish Company."[65] It remains unclear whom Chillik Weizmann preferred to deceive: his unrelenting brother, or the British court. However, the rest of this correspondence demonstrates that with Chillik Weizmann as its manager, the company preferred Jewish labor.[66]

The broader context to these accusations must be understood in light of British economic policy in Palestine, which hindered non-Jews.[67] Like the British and the Zionists, the Arab-Palestinians envisioned the economic potential of the land and debated about the means to 'unlock' it. In addition to agricultural transformation, during the age of colonial development, infrastructural projects were considered significant economic benefits.[68] For example, the importance of the new electricity grid and the Dead Sea mineral potential received much media attention and was popularized by newspapers and by national leaders, both in Arabic and Hebrew.[69] However, British colonial administrators, viewing Jews as agents of development, gave them the most infrastructural concessions, leaving Arab-Palestinians mostly empty-handed. As early as 1923, the young Jamal Al-Husseini, then the secretray to the Executive Committee of the Palestine Arab Congress, addressed the High Commissioner of Palestine, lamenting on the Arab loss of economic opportunities by referring to the governmental 'favoritism' for giving various concessions to Zionist-Jews.[70] Although some of Al-Husseini's arguments were inaccurate, it nevertheless demonstrates the economic importance of these

64 *Doar Hayom*, 05 March 1930.
65 Letter from Chillik Weizmann to Chaim Weizmann, 28 January 1930, 14-1316, WA.
66 This notion was part of a broader ideological movement of Jewish-Zionist actors, who called for the 'conquest of labor' (*kibush ha'avoda*). See Zachary Lockman, *Comrades and Enemies: Arab and Jewish Workers in Palestine, 1906-1948* (Berkeley, CA: University of California Press, 1996), 47-48.
67 Barbara Smith, *The Roots of Separation in Palestine: British Economic Policy, 1920-1929* (London: I. B. Tauris, 1993).
68 Norris, *Land of Progress*, 5-18.
69 Norris, 181; Fredrick Meiton, *Electrical Palestine: Capital and Technology from Empire to Nation* (Berkeley, CA: University of California Press, 2019), 81-82.
70 "Report on the State of Palestine Submitted to his Excellency the High Commissioner for Palestine by the Executive Committee Palestine Arab Congress," 13 October 1923, ג-4908/24, ISA.

development projects for Arab-Palestinians as well. Thus, the criticism of ICI Levant must be understood in light of these historical events and the continuous Arab-Palestinian dissatisfaction with the British (colonial) development policy in Palestine.[71]

Nevertheless, not all of the articles about ICI Levant were negative. Other articles celebrated the company and its activities in the local agricultural field. [72] During the British rule in Palestine, the black and red scale pest were a constant threat to Arab-Palestinian and Jewish orange cultivation.[73] In 1933, the Jerusalem based newspaper *Mir'at al-Sharq* published an article praising ICI Levant's help and specifically its head, Chillik Weizmann, in fighting this bug in the northern district.[74] The article began by describing the problem, emphasizing the government's insufficient help and inadequate solutions to exterminating the pest.[75] It then introduced the company and Weizmann, explaining the company's potential in offering solutions to the agricultural problems of Palestine using pesticides and fertilizers. More importantly, the writer emphasized the neutral character of the company's activities by referring to the activity of Weizmann as 'apolitical' and emphasizing the mutual gains of Arabs and Jews from the company's success in Palestine. The article concluded by paraphrasing the words of Weizmann himself, and connected the future of ICI Levant with the future of Palestine's economy and agriculture:

> "The manager [Weizmann] was right when he said: 'The future of ICI is the future of Palestine,' and what is the future of Palestine if not the future of its orange trees; the future of the orange trees is the extermination of the harming diseases."[76]

As noted before, orange cultivation was, until the Second World War, Palestine's most lucrative industry. According to government records, the orange export grew from 830,959 boxes in 1920-21 to 2,590,861 boxes in 1929-30 and further expanded to 13,055,770 boxes in 1938-39. The Second World War marked a stop to the orange industry's prosperity, as the number of exported boxes had dropped by half.[77] Due to financial difficulties and

71 Norris, Land of Progress, 168-204; Meiton, *Electrical Palestine,* 81-82.
72 For example, *Al-Sirat*, 15 December 1930; *Al-Difa'*, 20 February 1936.
73 Roza El-Eini, *Mandated Landscapes*, 144-145.
74 "Majhudat sharikat al-sana'at al-kimawiyya" ["The Endeavors of the Chemical Industries Company"] *Mir'at al-Sharq*, 23 September 1933.
75 These included uprooting unyielding trees and introducing a 'black scale tax' on orange cultivators. Both moves encountered vast opposition. *The Palestine Post*, 03 March 1933; *The Palestine Post*, 22 December 1932.
76 *Mir'at al-Sharq*, 23 September 1933.
77 *A Survey of Palestine: Prepared in December 1945 and January 1946 for the Information of the Anglo-*

lack of pesticides, orange growers witnessed the black scale returning to their cultivation plots during the war.[78] In contrast to the plague of the 1930s, which was mainly limited to northern Palestine, the black scale had now spread west and south, threatening the entire "citrus belt."[79] In 1944 the number of orchards infected by the black scale had reached between a quarter and a fifth of the total orange cultivation area in the country.[80] Like *Mir'at Al-Sharq's* reporter ten years before, the Palestine Joint Citrus Growers Committee realized the threats on the prominent place the orange economy had in Palestine. Sending an urgent warning to the government, the committee alerted, "we wish herewith respectively to call to your attention the most serious and pressing problem that is now facing the Palestine citrus industry, namely, the black scale, and to request that immediate steps be taken by the government to help save the industry from this threat to its existence."[81]

As such, just as during the 1930s, ICI Levant again assisted the government and the orange growers with its personnel and chemical substances.[82]

The interaction between ICI Levant and the Arab-Palestinian press thus reveals a complicated relationship. While critics perceived the company as an extension of Jewish colonization, other articles sought to neutralize the company's role in Palestine and to emphasize its benefits to the local cultivation plots and orchards. Seemingly, these two sets of opinions hold contrary explanations for ICI Levant's goals in Palestine and its means to achieve them. However, the epistemological world in which these writers and their interactions with the company existed was in relation to their economic future. In other words, they both criticized or praised ICI Levant as a part of a discourse that envisioned a national economy upon which the future nation would be based. At this specific historical moment, the company's strength and capital based on imperial reach, as well as its 'chemical agency,' which generated a global flow of expert knowledge and synthetic chemicals, were negotiated in the public arena. Here ICI Levant had a unique position in assisting or hindering the arrival

American Committee of Inquiry: Volume I (Palestine: Government Printer, 1946), 341-344.

78 Palestine Joint Citrus Growers Committee to Chief Secretary, "Black Scale on Citrus," 26/04/1944. ת-669.5, ISA.

79 G. E. Bodkin, "The Fumigation of Citrus Trees in Palestine," *Bulletin of Entomological Research* 16 no.2 (1925): 143-149.

80 Palestine Joint Citrus Growers Committee to Chief Secretary, "Black Scale on Citrus," 26/04/1944. ת-669.5, ISA.

81 Palestine Joint Citrus Growers Committee to Chief Secretary, "Black Scale on Citrus".

82 For example, see A. Baroai to Acting Chief Plant Protection Officer, "Government Grant for Black Scale Control," 21 March 1947. ת-679.23, ISA.

of the transformation of agricultural and industrial production. As the Synthetic Age was crystalizing in British-ruled Palestine, the means to establish the economy and the national space were, in this case, anchored in an imperial context, in which ICI Levant, as a chemical company, played a prominent part.

AGENT ORANGE: AN ARAB-PALESTINIAN EXPERT IN THE SYNTHETIC AGE

ICI Levant had a complex and multifaceted relationship with Arab-Palestinians in British-ruled Palestine. At the heart of this relationship stood the notion of Palestine's economic potential and the company's role in enhancing or hampering its materialization. In this section, one of the advocates for Palestine's economic potential, Husni al-Miqdadi, who was working for ICI Levant in Palestine and the region, will be introduced. As al-Miqdadi participated in this public discussion, he contributed to it from his own field of expertise as a 'citrus expert.' Furthermore, al-Miqdadi's writing reveals his vision of 'economy-making' in Palestine as a part of a broader contemporaneous vision of an Arabic awakening (*nahda* – النهضة). Al-Miqdadi's vision of economic *nahda* was entangled with British imperial-chemical networks and infrastructures in the Middle East and was profoundly related to the ongoing transformation brought by the Synthetic Age in the region.

Husni al-Miqdadi (حسني المقدادي) was born in 1903 in Tulkarem (طولكرم) in Ottoman-ruled Palestine. As a native of the city, al-Miqdadi was educated in the local primary school. Later, he received his middle school and high school education in Jerusalem. In 1921, al-Miqdadi joined the Land Surveying Department of the British administration in Palestine, and after two years of governmental service moved to study agricultural engineering in France. In 1926, he returned to Palestine and served as the principal of the agricultural school in his hometown of Tulkarem, which was one of the dozen educational centers of British agricultural policy in Palestine. The last stop in his documented career was as a company official for ICI Levant. Starting from 1928, he travelled between its regional branches in Palestine, Lebanon, and Iraq.[83]

Throughout his career, al-Miqdadi published many articles and essays on various subjects. As an agriculture expert, he mostly wrote about different modes of fruit tree cultivation, plant diseases, and various fertilization methods. By 1930 he published a book entitled "The Fertilizers and Their Usages" (الأسمدة واستعمالها), presenting himself on the cover as an advisor to ICI Levant and thanking some of its officials for their help in publishing the book.[84]

83 Y'aqub al-'awdat, *Min A'alam Al-fikr w'al-'adb fi Filastin* (Al-Quds: Dar al-asraa', 1992), 33-34.

84 Husni al-Miqdadi, *Al-'asmida w'isti'amalha w'fiha fusul w'idahat*

FIGURE 3: Fumigation efforts at Jaffa aimed at exterminating citrus pests. The Orange Trees our covered in tarpaulins. Approximately 1930-1933. Eric and Edith Matson Photograph Collection, Library of Congress.

Reviewing his writings, it is obvious that al-Miqdadi's area of expertise was citrus cultivation. For example, during the 1930s-1940s, he translated for *Filastin* several lectures about citrus and other fruit trees' fertilization methods, and published with another Jaffa based newspaper, *Al-Difa',* articles about citrus tree fertilizations and pests, in addition to other accounts on citrus diseases and how to prevent them.[85] As Palestine's

'an al-nabat w'al-turba w'an al-zibl w'isti'amalhu (Tulkarm: Maktab suriya w'filastin, 1930), 3-4.

85 *Filastin*, 25 October 1931; *Filastin*, 07

FIGURE 4: Measuring the quantities of cyanide and acid before the fumigation of the trees. In the center stands the government Entomologist. Around him are other foremen and laborers. Approximately 1922-1925. In later years, ICI Levant imported hydrogen cyanide and employed its agent to help the local orange cultivators. G. E. Bodkin, "The Fumigation of Citrus Trees in Palestine," *Bulletin of Entomological Research* 16 no.2 (1925): 153. Cambridge University Press.

most significant export until 1939 was oranges, it becomes clear why al-Miqdadi chose to specialize in citrus cultivation and their fertilization modes.

Al-Miqdadi also edited two agricultural journals, one based in Lebanon and the other in Palestine. The Palestinian journal was published by ICI Levant and distributed locally and regionally. In *Al-Majalla al-zira'iyya al-'arabiyya* (Journal of Arab Agriculture), the expertise of al-Miqdadi with citrus trees and fertilizers, and the company's interests in assisting to the agricultural transformation with its chemical products, interlaced as the journal published scientific

October 1931; *Filastin*, 13 June 1931; *Al-Difa'*, 02 March 1938; *Al-Difa', 02 December 1942; Al-Difa', 01 August 1945.*

agricultural articles by Arab and foreign experts. As a citrus expert, al-Miqdadi contributed articles on fruit tree fertilization and orange tree diseases. In addition, the journal published other economic-agricultural news, a 'questions to the editor' section, where agriculturalists from Palestine and the region would send their inquiries to the journal, and an agricultural calendar, which advised the readers of the proper times for fertilization and watering.[86]

When al-Miqdadi wrote about different modes of cultivation and various types of fertilizers, he wrote from his field of expertise. As the previously mentioned writings are mostly technical, they provide little historical access to al-Miqdadi's world of thought. Luckily, al-Miqdadi left other writings, giving a better picture of how he understood himself in relation to current-day issues, how he imagined the past, and how he envisioned the future. In the remaining part of this section, al-Miqdadi's additional writings will be explored in order to position him in the context of Arab-Palestinian *nahda* discourse in British-ruled Palestine.

In her remarkable research on economy-making in British-ruled Palestine, Sherene Seikaly describes a group of men that articulated their own vision of national economy. Over the pages of their journal *Al-Iqtisadat al-'arabiyya*, these 'men of capital' drew from diverse philosophies to craft economic thought and envisioned an economic *nahda* as part of a broader Arabic enlightenment project.[87] *Nahda*, meaning awakening, resurgence, or revival, is a distinct term for Arab cultural or intellectual 'revival' that first appeared at the onset of the nineteenth century, popularized somewhere in the last third of the same century.[88] During the interwar period, the *nahda* linked a nationally specific and a broader pan-Arab framework together. In addition, it served to bridge an historical gap between the past of the 'Arab civilization' and modern-day issues and concerns. As Peter Hill notes, the *nahda* must be understood vis-á-vis the contemporary changes and projects that its advocates lived through.[89] The British rule in Palestine was a period of empire-building and national crafting in the Middle East. Thus, creating an adequate economic basis was a crucial concern for people who sought to animate the future state. As noted before, Arab-Palestinians understood the economic potential of Palestine as derived from infrastructure projects and crop cultivation.

Al-Miqdadi realized the economic potential of Palestine as well. In his essay "The Economic Development of Palestine" (**الإصلاح الاقتصادي في فلسطين**), he explored the

86 *Al-Majalla al-zira'iyya al-'arabiyya,* 01 April 1947, 01 July 1947, 01 January 1948.

87 Seikaly, *Men of Capital*.

88 Peter Hill, *Utopia and Civilization in the Arab Nahda* (Cambridge: Cambridge University Press, 2019), 3.

89 Hill, *Utopia and Civilization*, 3.

economic conditions of the Arab world and Palestine's place in it. Similar to other Arab writers and authors during the interwar period, al-Miqdadi called for an 'Arab awakening' or *nahda*. Unlike many who advocated for the renaissance of the political and cultural spheres, however, al-Miqdadi insisted that this awakening must first be grounded on a firm economic basis:

> "The value of the civilized nation is depended on the value of its wealth. [Therefore], we must take care of our economy to our best extent since the progress of the nation is based on its capital development methods and on the wealth of its individuals."[90]

Situating himself and his epistemological world on a linear path of historical progress, al-Miqdadi was concerned that "most of the eastern nations had neglected this issue [economy-making] to such a degree that currently they are unable to progress along with the other civilized nations."[91] According to him, a proper economic revival would not take place by the "chattering of politicians" but by the practical education of youth about "economic and industrial issues."[92] The future of the nation was founded not only on material economic potential, but also on the proper education of the youth to think economically and rationally: "In order to improve we are in a dire need for a strong foundation upon which we will build our national awakening that will disperse this blessed economic spirit to our sons (الروح الاقتصادية المباركة)."[93]

The science of the economy was vital to this awakening project. "It is miserable that our daily newspapers are not interested in economic researches," lamented al-Miqdadi, "as they were and still are the best way to establish the strongest of civilizations."[94] Here, he echoes the rationale of *Al-Jami'a al-'arabiyya's* editor to publish al-Miqdadi's "valuable and useful [research] topic for the economic revival of the country."[95] Later in the article, al-Miqdadi moved to review the economic potential of Palestine based on a categorization of the 'five primary industries'– production (استخراجية); manufacturing (تحويلية); agriculture (زراعية); transport (نقلية); and commerce (تجارية). In these sections, he elaborated on the various minerals found in Palestine and the region, the new transportation road from Palestine to Iraq, and the new commerce opportunities from Haifa's harbor. Here, al-Miqdadi's account on the future economic potential of Palestine was firmly based on (re)

90 "Al-'islah *al-iqtisadi fi filastin*" ["The Economic Development of Palestine"] *Al-Jamia al-'arabiyya*, 15 September 1927.
91 *Al-Jamia al-'arabiyya*, 15 September 1927.
92 Ibid.
93 Ibid.
94 Ibid.
95 Ibid.

new(ed) imperial infrastructure designed to produce, extract, and deliver 'raw materials' in and out of the region.

The agricultural industry remained the last to be reviewed due to its fundamental importance to Palestine, "the foundation upon which we must build our economic regime (نظامنا الاقتصادي) is the agriculture since our country was always an agrarian country, which exported wheat, olives, cotton, wines and figs for the last 3000 years."[96] However, al-Miqdadi understood this *longue durée* of 'agrarian expertise' as not exclusive to Palestinians. In another essay, he highlighted the Arab civilization's specific experience and proficiency as agriculturalists, which went back to Middle Ages Spain. According to al-Miqdadi, "it will not be an overstatement to say that some of the European countries are basing their agricultural progress on the knowledge of the Arab agriculturalists in Andalusia."[97] Like Seikaly's 'men of capital,' al-Miqdadi followed the *nahda* narrative structure to reveal another "Arab civilizational secret."[98] Here he returned to the Andalusian past to harmonize the Arab-Palestinians' 'civilizational' skills with the new economic potentials of the interwar period in the region.

Like other *nahda* writers, al-Miqdadi understood himself as a part of the Arab civilization, which was trying to march forward on the track of 'progress.'[99] Simultaneously, he used his knowledge to design a local economic *nahda* with his own professional expertise.[100] In a later article, al-Miqdadi wrote at length on his vision for the future of citrus cultivation in Palestine. He started by emphasizing the essential place of orange cultivation for the economy of Palestine: "Most of the people know that the citrus agriculture is tremendously important in Palestine. There is no doubt that this agriculture concerns every individual from the inhabitants of the country, as the general economy of the state is based in its essence on the success or failure of this agriculture."[101] Al-Miqdadi continued by reviewing the past expansion of the cultivation area and the yearly export of orange boxes. As he preached ten years ago, and as a part of the scientific research endeavors the 'men of capital' advocated and praised, al-Miqdadi continued to offer his predictions on future agricultural-economic citrus trends based on the

96 ↑ "Al-'islah *al-iqtisadi fi filastin: II*" ["The Economic Development of Palestine: II"] *Al-Jamia al-'arabiyya*, 19 September 1927.

97 *Al-Jamia al-'arabiyya*, 19 September 1927.

98 Seikaly, *Men of Capital*, 45-48.

99 Ibid.

100 Seikaly argues that the economic *nahda* can only be fully understood in the relations between its local manifestations and its broader ideological logic. Ibid, 21.

101 "Mustaqbal zira'at al-'athmar al-hamdiyya" ["The Future of Fruit Tree Cultivation"] *Al-Difa'*, 25 December 1938.

numbers he examined beforehand.[102]

It is no wonder, then, to find an article about the economic potential of oranges in Palestine, written by al-Miqdadi, in the first published issue of *Al-Iqtisadat al-'arabiyya*, which was advocating an economic *nahda* project.[103] With this article and other writings, al-Miqdadi thus united economic achievement with national independence. More specifically, he used his particular expertise as an agriculturalist to contribute to the discourse of economic *nahda* in Palestine, and to articulate the economic foundations of the national future: "Our economic life (**حياتنا الاقتصادية**) and our financial activities (**نشاطنا المالي**) are both founded to a certain extent on orange cultivation. That is to say that the future of the country is tied to the future of this agriculture."[104]

Simultaneous to publishing his writings, al-Miqdadi worked as a selling agent and consultant to ICI Levant. As a fertilizer expert, al-Miqdadi's specific expertise was a product of a substantial change that was happening during the onset of the Synthetic Age and the rising flow of synthetic agrochemicals to Palestine and the Middle East. During the 1930s-1940s, chemical substances and chemical industries were becoming prevalent in the region. As an agent of the company, specializing in chemical fertilizers and pesticides, he was writing both on the technical side of his vision and on its political aspects. The orange growing industry in Palestine stood at the core of his future plans for the economy of Palestine. This vision was informed by his intellectual roots embedded in the interwar *nahda* movement and by his practical chemical expertise, which was itself a product of a structural shift towards an agricultural industrial dependency on chemical substances. As mentioned before, ICI Levant had a significant impact on this process in British-ruled Palestine.

Finally, examining ICI Levant's journal can provide further insight into the entanglements between the Synthetic Age as a global phenomenon and the local Palestinian agency inscribed in al-Miqdadi's economic *nahda* vision. Like other agents of the company, al-Miqdadi was traveling between ICI Levant's branches in Palestine and the area.[105] The spatial boundaries of these regional travels could be possibly traced back by considering Figure 5, taken from the *Al-Majalla al-zira'iyya al-'arabiyya*. An ICI Levant publication edited by al-Miqdadi himself, this journal advocated for the company's products all around the region. On the journal's front pages, the agricultural-economical space was assembled according to ICI Levant's operations in the region (ICI Egypt was a different sub-company). As its name

102 Seikaly, 42-44; *Al-Difa'*, 25 December 1938.

103 *Al-Iqtisadat al-'arabiyya* I(1), 01 January 1935.

104 *Al-Difa'*, 25 December 1938.

105 Letter from District Commissioner, Lydda District to Chief Secretary, 24 April 1947, ת-248/43, ISA.

suggests, it highlighted the region's agricultural aspects that were best suited to consume the company's products. Consequently, the dates of Basra, the grain fields of East Jordan, and the oranges of Palestine are prominently displayed as the main attractions on the cover page.[106]

During the interwar period, this spatial reorganization of the region was, of course, not only conceptualized by ICI Levant and al-Miqdadi. In an area that later became known as the Middle East, various colonial development policies encouraged British administrations to (re)establish communications, travel, and trade infrastructure in the region. Jacob Norris shows how this infrastructure, economic development, and the extraction of resources played a significant role in constructing British-ruled Palestine as physically and conceptually linked to the Mashriq.[107] Thus, from their vantage point in Palestine, al-Miqdadi and the other 'men of capital' conceptualized their local economic nahda vis-à-vis the region's spatial metamorphosis.

Juxtaposing the *Al-Majalla* front cover with Seikaly's 'men of capital' journal, *Al-Iqtisadat al-'arabiyya*, reveals the similar geo-economic logic behind the Arab economic *nahda*. In Figure 6, Palestine is characterized by its oranges. The Arab region is illustrated with its religious features (Mecca and Jerusalem) but mainly through its economical-agricultural-industrial prospects. One can see, for example, the oil field in Iraq (right side) and the sugar cane factory in Egypt (left side). Connecting these nation-state economies with the infrastructure of the British empire, the harbors of Haifa and Alexandria serve as the main entry and leaving points for commodities, while trains, trucks, and airplanes highlight non-maritime trade routes.[108]

This comparison reveals the entanglements between the intellectual aspects of the Palestinian-Arabic *nahda* and the material dimensions of British imperial-chemical networks. The economy envisioned and advocated by the 'men of capital' was to be based on various economic enterprises, as al-Miqdadi eloquently articulated above. Cash-crop cultivation and raw material extraction were major pillars in this scheme. As Norris and Seikaly show, these 'economic potentials' drove British actions and Arab-Palestinian intellectual thought in the region.[109] What both miss, however, is what al-Miqdadi's agency and his position with ICI make it possible for us to see–during the interwar period, and especially during the 1930s-1940s, a subtle transformation emerged. Agricultural and industrial production was becoming ever more dependent on the mass-production

106 *Al-Majalla al-ziraiyya al-'arabiyya*, 01 April 1947.
107 Norris, Land of Progress.
108 *Al-Iqtisadat al-'arabiyya* I(2), 15 January 1935.
109 Norris, *Land of Progress*; Seikaly, *Men of Capital.*

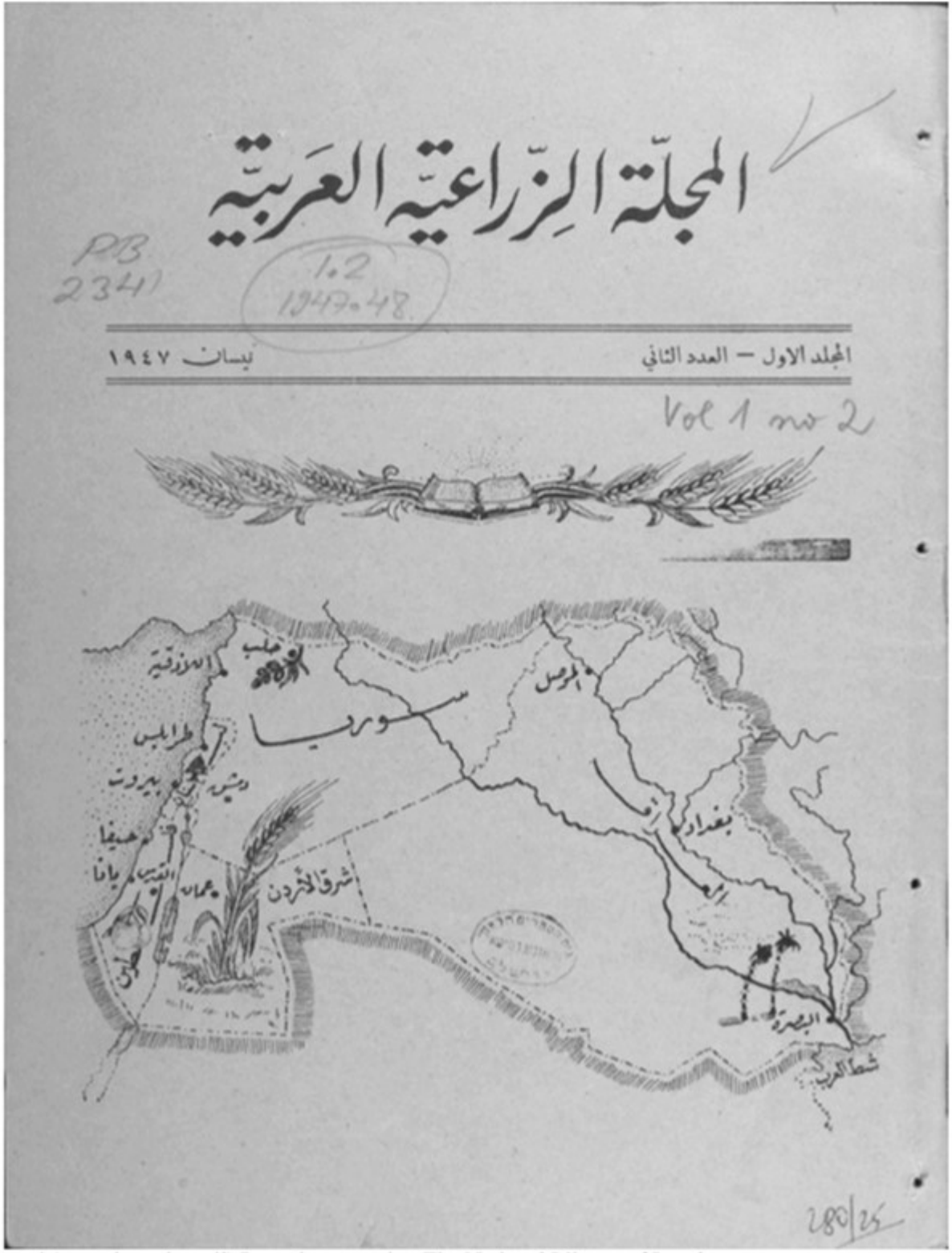

FIGURE 5: Cover page of *Al-Majalla al-ziraiyya al-'arabiyya*, 01 April 1947. Jrayed Collection: Arabic Newspapers of Ottoman and Mandatory Palestine, jrayed.nli.org.il, founded by the National Library of Israel.

and circulation of chemical substances.

In British-ruled Palestine, Arab-Palestinians envisioned an economic development that would culminate in national independence. However, this economic *nahda* was not limited spatially to the colonial states, as it was in constant relationship with a broader intellectual world of an Arab 'civilizational' awakening. Writers like al-Miqdadi devoted themselves to the agricultural-economical aspects of this project. Al-Miqdadi's specific expertise revolved around Palestine's most lucrative agricultural crop, oranges, and was informed by the potential to enhance its economic value with British agrochemicals. From his 'expert' position, al-Miqdadi contributed to the prevalent discourse of national economic awakening. As the two front pages of the journals exhibit, this agricultural-economic transformation depended on British imperial regional infrastructure and imperial goods. Al-Miqdadi's national vision was intrinsically based on the new possibilities generated by British imperial networks, and more specifically, on the potential of applying agrochemicals (produced by the British Empire) in the materialization of this economic *nahda*. His world of thought reveals the historical traces of the Synthetic Age outside of the 'West.' Thus, his account shows that the social and material prospects inscribed in the global Synthetic Age met local forces which were inspired to use them in order to materialize their national economies.

CONCLUSION

By reconstructing the history of ICI Levant activities and examining Husni al-Miqdadi's writings, this article has sought to explore the crystallization of the Synthetic Age in British-ruled Palestine. In the first section, the global dimensions of the Synthetic Age were outlined, demonstrating how imperial infrastructure and colonial mindsets played a crucial role in its manifestation outside of Europe and North America. Analyzing the various activities of ICI Levant and its relations to the swelling global flow of chemicals, the infrastructure of synthetics circulation was further illuminated, contributing to an understanding of the company as one of the 'intermediaries' between the global Synthetic Age and local actors in British-ruled Palestine. Arriving in the British colony, the company drew close links with prominent Zionist figures and other local agents. The company also worked intimately with the British government and with Jewish research institutes to assist them in their scientific endeavors. This was a part of an imperial effort, as ICI operated in other colonies with similar methods.

As a giant global chemical company, ICI Levant's products were necessary for executing the various colonial development

FIGURE 6: Cover page of *Al-Iqtisadat al-'arabiyya* I(2), 15 January 1935. Jrayed Collection: Arabic Newspapers of Ottoman and Mandatory Palestine, jrayed.nli.org.il, founded by the National Library of Israel.

projects around the British empire. In Palestine, as the major local importer of agrochemicals, it held a significant position for Zionist-Jews and Arab-Palestinians, both seeking to transform the economic basis of the land in order to materialize a future national economy that would be based on agriculture. The company had a complex relationship with the Arab-Palestinian middle-class, which either argued against the company or celebrated its agrarian contributions. This multifaceted interaction was part of a broader discussion taking place in British-ruled Palestine about economy-making and national independence. Together with infrastructural projects, the economic potential of Palestine was conceived through its agricultural prospects. ICI Levant had a significant role, as its chemical products were used by capitalists and agricultural experts to support different visions to 'develop' Palestine.

One of these visionaries was Husni al-Miqdadi, who, with his own expertise as a citrus authority and as an agrochemical expert, was able to 'join in' on the conversation of economic awakening in Palestine. As al-Miqdadi was working for ICI Levant, he sought to promote its 'addictive' agrochemicals. Simultaneously, he was also advocating for a national independence based on local industry, commerce, and modern agriculture. Al-Miqdadi's vision of a national economic Arab *nahda* was entangled with British imperial-chemical networks and infrastructures in the Middle East and was fundamentally related to the changes brought by the Synthetic Age. Thus, al-Miqdadi's case shows how the Synthetic Age and the prospected potential inscribed in its ideas and materials met local forces that sought to use them for their own advantage.

Following al-Miqdadi's historical agency, the realization of national independence in Palestine during the interwar period was conditioned on the imperial flow of agrochemicals that would materialize it. However, this notion holds within it a sharp contrast, as the aspiration to achieve independence from Britain created a dependence on its products. This seeming paradox can leave us with more potential inquiries about the interdependencies between agrochemicals, imperial industries, and colonial spaces.

More importantly, it highlights the role of British imperialism in setting into motion the Synthetic Age—an historical process that contributed to our contemporary global 'addiction' to synthetic chemicals. Modern industrial agriculture, which relies heavily on synthetic chemicals, is playing a significant role in our current predicament of ecological crises while functioning as a catalyst to global warming.[110] In addition to

110 As of 2014, it generates about 14 percent of the world's greenhouse emissions. Climate Change 2014 Synthesis Report, IPPC 2014, 88, accessed 03 May 2021, https://www.

interferences with biochemical cycles, industrialized agriculture's intensive usage of pesticides and herbicides have become an environmental hazard, which pollutes waters, soils, and living organisms.[111]

In light of our current global cascading disaster, conceptualizations of victorious (Western) innovation overcoming Malthusian future nightmares are not sufficient in explaining the origins of our global chemical addiction.[112] Nor do accounts of Green Revolution(s) and nitrogen and phosphorus cycles help us reveal the deep and entangled historical roots of our chemical dependencies.[113] Revealing the entanglements between al-Miqdadi's vision, ICI Levant's actions in British-ruled Palestine and British imperialism in the Middle East might help us to start unpacking the history of our synthetic chemical obsession.

ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

111 Sharma, A., Kumar, V., Shahzad, B. *et al.* Worldwide Pesticide Usage and its Impacts on Ecosystem. *SN Appl. Sci.* **1,** no. 1446 (2019), accessed 03 May 2021: https://doi.org/10.1007/s42452-019-1485-1.

112 Melillo, "The First Green Revolution," 1056-1060.

113 Ibid; Smil, *Enriching the Earth*; Dana Cordell, Jan-Olof Drangert and Stuart White, "The Story of Phosphorus: Global Food Security and Food for Thought," *Global Environmental Change* 19 (2009): 292-305, https://doi.org/10.1016/j.gloenvcha.2008.10.009.