

**Egypt's Agricultural History from Alexander to Sadat**

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**Introduction:**

The Nile and its fertile soil have served as a source of life for Egyptians since at least 332 B.C. Despite technological process through Egypt's various empires, the Nile and its soil are no longer able to feed the Egyptian people. Egyptians now rely on imports to satisfy their wants and needs. A common question asked today is: "Why did Egypt's agriculture decline and what, if anything, be done about it?"

Agricultural development is certainly a wide and multi-faceted field for which, unfortunately, there is no one easy answer. If one is to attempt to find answers for Egypt's agricultural decline, one must engage in a thorough review. This paper is part one of a future series - or possibly dissertation - on Egypt's agricultural development. This paper offers a historical review of Egypt's agriculture taking into account the impacts that policies such as control and liberalization have had on Egypt's agricultural development.

In section one, Egypt's broad history will be assessed to determine the role agriculture played in various empires that ruled the area. Patterns among these empires will be noted and Egypt's economic heyday will be defined. It will be found that Egypt's agriculture played a vital role to its occupiers - from the Greek to the British. Egypt's economic heyday will be seen as the rule of Mohammad Ali. His rule is perhaps the only one during which the country saw actual multi-sector reform, or so it is said. Reforms under Nasser and Sadat were attempted, but not as successfully. Section one is based on the book *A History of Egypt: From Earliest Times to the Present* by Jason Thompson, associate professor of history at the American University of Cairo.

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In section two, agricultural policies, beginning from "primitive" agriculture under the Ottomans to Nasser's government, will be discussed. The section focuses on the interplay of social classes and the impacts of various technologies. This section also compares the impact of nationalization of Mohammad Ali and Nasser to the liberalization of Sadat. Section two is based on the book *Egypt's Agricultural Development 1800-1980* by Alan Richards, professor at the University of California Santa Cruz.

### **Section one: History of Agriculture**

#### **Section One, Part A: Agriculture in Ancient History**

In *A History of Egypt*, Jason Thompson provides a conclusive history of Egypt from the start of history Mubarak's time. Section one of this paper will describe Egypt's history from the time of its conquering by Alexander the great. A special focus will be put on agriculture. The aim of this section is to determine patterns and trends in Egypt's agriculture and to discuss the heyday of Egyptian Agriculture: rule under Mohammad Ali. So as to maintain continuity and decrease contradictions in historical interpretations, this section is based on only the book *A History of Egypt*.

In 332 B.C. Ptolemy I Soter, a Greek, proclaimed himself the Pharaoh of Egypt after the Death of Alexander the Great. Egypt's greatest source of wealth by far was the produce of the land which was considered to be in royal ownership with tenure allotted to individuals under various conditions. Much of what was produced was collected by the government and redistributed to the Greek people or exported for foreign exchange. At this time, Egypt was composed of a Greek class of rulers superimposed on great masses of native Egyptians who lived at the subsistence level.

After the Greeks, the Romans conquered Egypt. Like under the Greek, Egypt's land was an imperial estate from which the state drew produce, rents and profit. This was due to Rome's policy in which Egypt was its breadbasket - a source of exploitation, not an area to be developed. As a result, about 10 percent of Egypt's harvest went to Rome. The Egyptian peasants continued to be exploited at the time, often being taxed till they could not afford to continue farming. Thus large tracts of land fell into disuse.

During Greek rule, Christianity began to spread over Egypt and the country became a stronghold of Christianity. It is assumed that Christianity came to the region from St. Mark who was murdered in Alexandria. A historical development during the time was the creation of the Coptic language, which formed as a way of using Greek alphabet to represent Egyptian sounds. As per before Christianity, the Roman empire continued to exploit the country for grain supply. Slowly plague began to affect the population and rebellion against the harsh rulers drew wide spread. This opened the door to an Islamic Egypt.

In 640 AD the Muslims (Abbasids) occupied Egypt. A new capital was created known as Fustat and Egypt became a province of the Arab Empire. Slowly Egypt transformed into an Arabic speaking and Muslim population through intermarriage and immigration. In 706 AD Arabic became the official language, replacing Coptic in the streets and Greek in the government. The Fatimid's took over in 909 and built Cairo. Their power came from a strong economy and controlled trade. They took advantage of the Nile Valley to export and improve their balance of trade. They maintained the waterworks and reduced burdensome taxes, increasing the land's productivity. After the Fatimid's the Mamluks reigned from 1250 to 1517.

In 1520, Egypt became a part of the Ottoman Empire and would remain so for 400 years. Egypt resumed its role as a breadbasket for a foreign power and was used to feed the people of Istanbul. In addition, Egypt's industry was expanded so that it became a center for

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textile production and export. While Alexandria's role decreased till it became a fishing village, Cairo became a great city of the East despite its provincial status. There was a brief interlude in 1798 when Napoleon invaded Egypt, but Sultan Selim declared war on the French and Napoleon left. Afterwards, France sent a Commission of Sciences and Arts to inventory Egypt's agriculture - items that would be of interest in a prospective colony. Britain expressed similar interests.

To summarize, Egypt was under rule of the Greeks, Romans, Christian Romans, Abbasids, Persians, Mamluks, Fatimids and Ottomons. As each empire came and went, Egypt's ruling identity changed, as did the identity of the Egyptian people. Despite the power, however, the Egyptian peasants were never in power and were almost always exploited and oppressed. Each ruling empire depended on the Nile as a source of food, foreign currency, and accordingly, economic power. Several of these empires did not attempt, however, to actually develop Egypt further than its agriculture. This changed in modern Egypt under Mohammad Ali.

### **Section One, Part B: Modern Agricultural History under Mohammad Ali**

Mohammad Ali, an Albanian, became Pasha of Egypt in 1805, thus starting the era known as Modern Egypt. It is important to note that Egypt was still under the Ottoman umbrella during this time, and would be until British occupation in 1882. Ali engaged in a program of great reform in which Egypt became a modern industrial society and major military power. He took on European models and expertise and applied them within Egyptian context. He highbred talent from all over the world and sent Egyptians abroad to learn. He hoped this great change would increase his own power and help to separate Egypt from the Ottoman Empire.

In order to finance his plans, Ali took control of Egypt's agriculture and revised the tax structure so that almost all of Egypt's land became a state ownership. He decreed what to plant and would then purchase the output at a low price to export it for foreign currency. Ali determined that Egypt would specialize in long-staple cotton, which slowly but surely became Egypt's major export crop. While he could have required Egyptians export wheat instead of cotton, but there were few openings in the world market for wheat due to export laws in Britain and France. Cotton, on the other hand, was under high demand and was subject to less export restrictions.

Through agriculture, Ali obtained a large dependable income with which he financed his projects. These included agricultural works such as dams, dikes and barrages. Millions of land were brought under cultivation during this time. Money from agriculture was used to modernize and industrialized the country. Factories of all kinds appeared to meet the country's growing needs. To become self-sufficient, Ali established trade barriers so that cheap British products - especially textiles - would not compete with Egyptian products. Egypt became the leading industrialized nation in the Eastern Mediterranean. In addition to the economy, Ali reformed the government by creating specialized bureaucracies, establishing educational reforms and healthcare reforms. All these changes, it must be emphasized, took place using Egyptian wealth only with no loans what so ever.

Mohammad Ali was succeeded by several of his sons after his death. While there were times of prosperity - such as during the American Civil War when cotton exports were in high demand - and while his sons built the Suez Canal, Egypt's debt spiraled out of control to finance its military occupations and thus the country's control fell to its loaners - Britain and France - around 1878. While initially the British and the French decided to invade militarily, only Britain ended up actually doing so in 1882 when France withdrew due to

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parliamentary problems in France. The British, like previous occupiers, developed Egypt agriculturally - they build the Aswan Dam (not to be confused with the Aswan High Dam) and increased Egypt's cotton production. However manufacturing and education were highly disestablished. The Egyptian people greatly resisted their foreign rulers and nationalism began to grow in the country. Finally, after much struggle, Egypt was deemed an independent state in 1922.

During the Monarchy that was set up after the British left Egypt, the country's land was gifted to the rich and favorable. In the 1920's, 75 percent of Egypt's arable land was owned by 150,000 people. The remaining land was held by one million or so. There was a pressing need for land reform. In such a way, the years after Mohammad Ali may have included investment in agricultural infrastructure, but all other aspects of Egypt's economy were greatly ignored. In addition, inequality was a widespread problem. In response to such injustices, the Free officers movement chaired by Nasser, staged a coup, bringing an end to a phase of occupation by the Kings and the British. King Farouk, upon his departure, warned his successors stating "it isn't easy, you know, to govern Egypt" (Thompson pg 292).

### **Section One, Part C: Modern Agricultural History under the Presidents**

In 1952, the Revolution Command Council - composed of members of the Free Officers and other individuals - took over Egypt and had no real agenda. At first Mohammad Naguib was prime minister and the president. Then Nasser staged a coup and became president without an election. Nasser implemented two main agricultural policies. First, land reform. In 1952, Nasser limited the size of a family holding to two to three hundred feddans. This dealt a blow to Egypt's landowning class, highly influential previously. Such changes affected only 10 percent of Egypt's land,

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benefitted 200,000 or so peasants and only benefited a small portion of the landless rural population .

Second, Nasser created the Aswan High to increase productivity and generate energy. The damn had several drawbacks: it led to the displacement of people, archaeological loss and the end of natural fertilizer as nitrogen-rich silt fell to the bottom of Lake Nasser. In addition the fishing industry on the Mediterranean waters was devastated. The damn also had several benefits: it increased arable land in Egypt by about a million acres, increased the amount of produce created and added ten billion kilowatts of energy to Egypt's grid.

In addition to agriculture, Nasser enacted several reforms in relation to welfare, education, healthcare and more. Several of these reforms were greatly limited or unrealistic. For example, by guaranteeing free university education for all with limited funding, university standards plummeted and many Egyptian professors left the country in search of better opportunities. In addition, there was a swelling of university graduates for which there were not enough jobs.

Like Mohammad Ali, Nasser envisioned a better-educated Egypt, but his vision was much too unrealistic. Nasser attempted to reform industry, like Mohammad Ali, by nationalizing industry. The country released socialist-style five-year plans in 1959 with goals to double national income. In 1964 the state's takeover of the economy was complete. Government-owned businesses did not succeed and were full of inefficiencies. In addition, bureaucracy expanded rapidly, hiring college graduates who could not find employment elsewhere. With so many responsibilities and expenses, the country borrowed heavily, creating a serious balance of payments deficit. In conclusion, both Nasser and Mohammad Ali envisioned a multi-sector reform plan for Egypt. Egypt's closed economy cannot be blamed for Nasser's failures because Ali implemented similar policies of nationalization and

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trade restrictions. Why it is that Nasser failed while Mohammad Ali did not is an interesting that is further probed in section two of this paper.

After Nasser died from a heart attack, Anwar Sadat became president in 1970 and began a project of de-nasserization. This program aimed to encourage private sector growth and to attract foreign investment through extensive economic liberalization. The program actually decreased the success of Egypt's agriculture and industry. First, investment went into tourism and industries like soda drinks. Little was invested in Egypt's agriculture or basic industry. Second, the liberalization actually reduced internal industry and commerce by encouraging large-scale importation of foreign consumer goods that drove locally produced goods from the market. Third, while emigration increases resulted in remittances becoming the greatest source of foreign exchange, most of the money sent back was used to purchase imports. Fourth, government resources were used to purchase subsidized food, greatly increasing government deficit.

### **Section One, Part D: Summary of Section 1**

Section one reviewed Egypt's long agricultural history. Through this history, the value of the Nile, its soil and the Egyptian farmers has been clearly established. These resources allowed empires such as the Roman, Greek, Persian and Ottoman, to not only be "fed", but also to receive foreign currency and to expand their industries and armies. Unfortunately, the Egyptian people were greatly poverty through the various empires. Mohammad Ali, though an Albanian, perhaps established the greatest heyday of Egypt, not only taking advantage of its agricultural treasures, but also establishing its industry, education and healthcare. Years after Ali, Nasser took over Egypt – serving as the first truly Egyptian ruler of Egypt in 2000 years. Nasser's attempted to reform Egypt had several

successes, but also failures. After Nasser, Sadat started Egypt down a path that was perceived would lead to success: liberalization. In reality, however, Egypt was not ready for liberalization and the result of such a policy has been increasing imports, the stagnation of agricultural production and an inability to compete in the world market.

Thompson concludes his book by stating that few have noticed this agricultural devolution: during the Nasser years, Egypt became a net food importer; by the end of Sadat's presidency, Egypt was importing more than half of its grain; the amount of arable land added by the construction of the High Dam has been wiped out by urbanization; in Southwest Cairo, some of the richest agricultural lands are vanishing under close-packed apartment buildings, often made of bricks composed of topsoil; production has lagged, exports have lagged and imports have blossomed. Thompson certainly laments this devolution but believes that so long as the soil, the Nile and the farmers remain, there is hope for a better agricultural Egypt.

## **Section Two: Policies of Agriculture**

Section two of this paper delves deeper into the actual agricultural policies implemented in Egypt. This section focuses less on broad history and more on agricultural technology, social classes and government policy. Policies starting from the Mamluks and ending at Nasser are discussed. This section is based on the book *Egypt's Agricultural Development 1800-1980* by Alan Richards, professor emeritus at the University of California Santa Cruz.

### **Section Two, Part A: Mamluks to Mohammad Ali**

From 1515 to 1882, Egypt was under Ottoman rule and served as its granary, supplying foodstuffs to Rumelia Anatolia, Syria and the Hejaz. Specifically, in the 1500's, Egypt was under Mamluk rule under an Ottoman umbrella. During this time, the land was divided into large tax farms known as *iltizam's*. Each plot was owned by the government but was assigned to Mamluk leader to administer. Ten percent of the land was for his own personal use, which he could rent or pay laborers to use. The peasants were "given" the 90 percent of the land for which they paid taxes in the form of produce. In the middle/upper Egypt, division of *iltizams* was given to the sheikh who determined which peasants would farm which area after every Nile flooding. In lower Egypt, individual families retained cultivation of certain plots in the *iltizam* that were often handed from peasant father to son. The sheikh was also the connection point between the ruler and the peasants and was responsible for tax collection.

During this time farmers could cultivate whatever crops they saw fit. Lands were cropped once per year on a rotation of wheat & barley one year and birsim & beans the next. The farmers' diet was composed of beans and millet and was supplemented by small amounts of fish, milk, fruits and vegetables. The farmers also farmed a variety of cash crops, such as sugar, indigo and rice. These required a great deal of labor and were only grown by "well-to-do" proprietors or peasant cooperatives. Cotton was also grown, but it was not a profitable crop as it did not match the irrigation system or agrarian society of the time. For example, cotton required a great deal of irrigation during the summer during which the Nile was at a low point. Finally, the irrigation system was based on the Nile flow and required no fertilizer and very minimal land preparation or watering.

In 1805 Muhammad Ali defeated the mamluks and rose to power. He had grand plans for Egypt that required capital. To fund these plans, Ali removed the previous tax system of *iltizam* and created one known as *ihtikar*, or monopoly system. According to system this system, Ali took control of lands in Egypt. Government officials were responsible for tax collection, peasants delivered crops at fixed prices that were below market price and internal trade and external trade were monopolized.

When Ali took power, Egypt exported wheat to Britain and France as a source of foreign revenue. Due to trade restrictions in the two countries, however, wheat export was limited. Ali decided to that because cotton was in high demand, Egypt would export cotton instead. He invested in large-scale irrigation works that increased the amount of land that could be cultivated in the summer. He tried to induce peasants to grow cotton by offering high prices and working capital. The peasants resisted, so Ali extended great pressure on them via their village sheikh who was instructed beat those who did not comply with the agricultural policies.

Ali's introduction of cotton was oppressive to the Egyptian people, as mentioned above, but so was his corve system. The agricultural infrastructure projects that he started were built by conscripted peasants who were offered little benefits for their labor. Military conscription was also forced upon the Egyptians. Accordingly, despite great progress relation to production, peasants revolted, mutilated themselves or fled their lands. By the end of Mohammad Ali's rule, 25 percent of Egypt's land was uncultivable due to labor shortage. Such labor shortages, as well as other political pressures, pressured Ali to release his monopoly. He gave large chunks of land grants to military officers, foreigners and his family. Such a move created a ruling class of landlords and slowly began the path towards property rights in Egypt.

After Mohammad Ali's death, full-land ownership became a general rule for Turko-Egyptian pashas. As a result, one percent of landowners held more than 40 percent of the land and over 80 percent of the landowners controlled only 20 percent of the land. Agricultural transformed into a *ezbah*, or hamlet, system in which farmers were given plots in return for their labor on the pasha's cotton crop. A second feature of this time is the improvement of infrastructure through which railroad tracks tripled, the harbor at Alexandria improved and irrigation development continued.

## **Section Two, Part B: British Rule**

Part B analyzes the changes that agriculture underwent during British occupation. The British completed the transformation of the irrigation system which had begun under Muhammad Ali. The completion of this project made perennial irrigation (as compared to basin irrigation) and cotton cultivation possible over the entire cultivated area of the Delta. Another barrage, completed in 1902, made perennial irrigation possible in all of Middle Egypt by 1909. Finally, the completion of the Aswan Dam in 1902 increased the supply of summer water through the country. All of these changes made possible further expansion of cotton production.

Perennial irrigation also made a two-year crop rotation system possible. This system allowed for great yield over a shorter period of time. During the first year, cotton and then wheat, barley or beans were grown. During the second year, the land was allowed to fallow and then maize and birsim were grown. Previous to this system, Egypt was used to a three-year irrigation system. Under a three-year irrigation, birsim and then cotton were grown in year one, beans and then fallow were grown in year two and then wheat and then maize were grown in year three. The two-year system allowed for more to be planted in less time, but it also has negative effects on the quality of soil.

Four classes existed at the time: pasha's, less-poor peasants (farmers), poor peasants (farmers) and landless peasants (agricultural laborers). Poor peasants switched from three-year to two-year as it meant more "wealth" in shorter time. This allowed them to receive cash for cotton, wheat for food and then birsim for fodder in two-year cycles instead of three. Despite the fact that the two-year system was bad for the soil, the peasants switched over due to financial limitations. Their lands were too small for subsistence, and

accordingly, they had to rely on the market for food. The faster they could receive the produce of their land, the better.

By 1908, 58 percent of the cultivated area had switched to the two-year system. While the two-year system increased yield in the short run, in the long run it had land-destroying effects due to increased intensity of land use. Accordingly, cotton yields declined due to the rise in the water table, soil deterioration due to shortening of fallow, insect attacks and deterioration of seed quality. While drainage would have resolved several of these problems, the British did not have a large enough budget to finance proper water drainage. The effects of the two-year system added up and Egypt went through a agricultural involution between 1920 and 1940.

In conclusion, the British introduced an expansive irrigation system that increased cotton yield if implemented as a three-year system. On the other hand, the irrigation system made the two-year system possible which then led to a decline in Egypt's agricultural yields. In this way a technology (irrigation) was created to increase yield but actually decreased it due to the interplay of social forces. In addition to decreased productivity due to the two-year system, the lives of the peasants were mired with poverty and disease. Both the landless and the land-poor were ill-nourished, disease-ridden and subject to discrimination at the hands of the wealthy. It was difficult, if not impossible, for them to receive an education. Change would soon arrive.

## Section Two, Part C: Nasser's Policies

In 1952, Gamal Abdel Nasser became Egypt's president. Nasser's agricultural reform emphasized taking the land of the rich pashas and distributing it to poor peasants. Individuals with more than 200 *feddans* had their "excess" land confiscated and were compensated for the land in cash. The confiscated land was then distributed to poor peasants. Only 12.5 % of Egyptian land was reformed in such a way and a total of 334,000 families received land. Ex-tenants received most, since they were presumed to have necessary farming skills, while landless laborers received little land. Dividing the land increased agricultural productivity, which the author says is in tune with a general trend in the third world where land reform results in output increases and yield increases.

The regime also introduced a system of cooperatives. Farmers who received land were required to join such organizations. They were given orders as to what crops to plant and in what rotations, imposing the three-year system. Cooperatives had supervisors who ensured farmers followed the orders. The cooperatives also took over crop marketing and input supply whereas the government purchased fertilizer and sold it to farmers at below market prices. The cooperatives were mainly concerned with ensuring that cotton and wheat were produced. The result of the cooperatives were mixed. On one hand, they changed the crop rotation to the better and increased supply of fertilizer and pesticides. On the other hand, the cooperatives increased inequality. Rich peasants shifted to growing more profitable fruits and vegetables as they could afford the penalties. Poor farmers on the other hand were unable to and were forced to produce less profitable cotton and wheat.

In addition to land reform and cooperatives, Nasser also introduced price and area regulations. The government's goal was to sell agriculture to receive foreign exchange and to provide subsidized food to people in the cities to prevent food-price inflation. To do this,

the government required certain areas to grow certain crops. It then purchased these crops from the farmers at below world-market prices and exported them to make a profit. Thus farmers would plant cotton, take it to the massive government owned cotton gins where they would be paid. Taking over the gins would ensure that farmers used government-owned marketing channels.

Well-to-do farmers evaded the government's plans. They neglected the lower-priced cotton and wheat and sold the subsidized fertilizer on the black market or used it on vegetable crops which did not have price controls. There is considerable evidence that such practices were common. For example, during Nasser's time major field crops with controlled prices declined as a percentage of cropped area in favor of higher value products like berseem, fruits and vegetables. Poor farmers could not evade the laws as easily as they could not afford to pay the penalties of doing so.

The final major agriculture-related policy that Nasser initiated was investing in the Aswan High Dam. The dam eliminated the threat of flooding, allowed crop shifts which increased land productivity and agricultural output and increased water availability which made more fertilizer use possible. Three ecological problems occurred due to the dam: evaporation and seepage, absence of silt and drainage difficulties. Instead of naturally flowing onto the land, all the fertile silt accumulated at the bottom of Lake Nasser. The drainage difficulties that were faced were similar to those faced by the British. The government's neglect of drainage had a negative impact on long-run productivity. Drains were built, but not as many as were required and they certainly were neglected.

## **Section Two, Part E: Conclusion of Section 2**

This section traced how the increase in quantity of water supply allowed a shift from basin to perennial irrigation, made cotton production possible and raised crop yields. At the same time ecological and social problems which slowed growth of output and stimulated further technical change. Other important changes include changes in crop rotation and the increased use of industrial inputs. This section has traced how technical changes are influenced by and shape social relations, market relations and government policy.

Richards concludes by stating that there are two broad theories to why Egypt continues to be undeveloped. The first states is that "underdevelopment" is internally generated by factors such as a lack of entrepreneurs, distorted internal prices and corruption. The second states that it has to do with outside factors such as the international economic system and war. Richards believes both are at play in Egypt. For example, it was both internal and external factors that influenced Mohammad Ali to determine that cotton was the key to Egypt's development.

Accordingly, Richards states that a complex interaction of internal and external forces has produced the pattern of Egyptian agricultural development (or current lack of development). He states that the "process is like two juxtaposed mirrors where one finds an infinite regress of domestic and international causalities" and he hopes that the future forces will cease to leave the peasants "as poor as a needle, which clothes others, but remains itself unclad".

## **Conclusion**

This paper offers a historical analysis of Egypt's agriculture from Alexander to Nasser. There are several conclusions that can be made through the historical review which will serve useful to future papers on Egypt's development. First, contrary to Egyptian belief, the life of a farmer was never ideal but was in fact full of suppression and oppression. Calls to return to the glorious agricultural past must keep in mind that such "glory" was in fact only reserved for the ruling class. Second, Egypt's current agricultural decline is not a result of Nasser's land division (as is commonly stated in Egypt). In fact land division actually increased productivity. Third, liberalization on its own is not the key to solving Egypt's dilemmas. Liberalization under Sadat and Mubarak caused cotton and wheat to decline in importance and for exports to increase. Fourth, the strong state and nationalization on their own are not impediments to Egypt's growth as Egypt grew under Mohammad Ali's closed-doors policy. Fifth, there is a difference between the goals of a policy and the actual reality of its implementation - or lack thereof - and often policies are deemed unrealistic as they do not match the incentives of the people. Finally, a wide variety of both internal and external factors have affected Egypt's agricultural growth, and both must be kept in mind in future reviews of the country's agricultural history.

**Works Cited**

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