

**Green Revolution on
Dryland: The Rockefeller
Foundation and the Turkish
Wheat and Training Project,
1970-1982**

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Abstract

This report introduces the Turkish Wheat and Training Project, one of the Rockefeller Foundation’s flagship agricultural programs in the Near East, and a relatively unstudied player in Turkey’s “green revolution.” From 1970 to 1982, the Ankara-based, multinational staff collected plant samples from around the world, experimented with high-yielding varieties of (mostly) winter wheat, facilitated Turkish scientists’ education abroad, and advocated for wheat’s centrality to the Turkish economy. While grafted from the green revolution’s most emblematic institution—the International Maize and Wheat Improvement Center (CIMMYT)—the Turkish Wheat Project had roots in two deeper processes: the concept that Turkey was not living up to its agricultural potential and Ankara’s engagement with US aid and expertise. After sketching these themes with sources from the Rockefeller Archive Center, this report narrates the wheat project’s origins, participants, activities, and shortcomings. While the project’s role as an engine of Turkey’s agricultural “modernization” was—and remains—difficult to assess, its archive, situated at a confluence of institutions and epistemologies, is a valuable source for approaching the histories of Turkish agriculture, the green revolution, and the Cold War.

Green Revolution on Dryland: The Rockefeller Foundation and the Turkish Wheat and Training Project, 1970-1982¹

In 1975, the Republic of Turkey celebrated its largest wheat yield on record: roughly 15 million tons. In a country where the average citizen consumed over 200 kilograms of wheat annually—ostensibly more than in any other country—this was tremendous news. To contemporary observers, this abundance vindicated Turkey’s embrace of the “green revolution” and its suite of technologies: fertilizers, mechanized equipment, pesticides, herbicides, and high-yielding crop varieties.² Few had more reason to be elated than Bill C. Wright, the American co-director of the Turkish Wheat and Training Project, one of the Rockefeller Foundation’s flagship agricultural programs in the Near East.³ His correspondence, however, in the Rockefeller Archive Center’s (RAC) collections, reflects both enthusiasm and a deeper uncertainty about the project’s actual contributions. To a colleague in Nigeria, Wright joked,

For your information, sir, 1975 was a new record production for wheat in Turkey...No doubt some of this increase was a result of new technology but probably the biggest factor was a damned good rain in the spring. But as they say, if it happens during your administration, you can take credit for it!⁴

Though the Turkish Wheat Project tallied many successes from 1970 to 1982 (measured by the quantity of researchers trained, plant samples exchanged, and studies published), its role as an engine of Turkey’s agricultural “modernization” was—and remains—more difficult to assess.

This report, while preliminary in its findings, will introduce the Turkish Wheat Project’s origins, participants, and activities. In addition to presenting a high-profile, but relatively unstudied player in Turkey’s green revolution, this exercise will highlight RAC holdings and suggest themes for further research, both in my

own project and for future RAC visitors. My time in the reading room fell in the early stages of my dissertation research, which explores the connection between Cold War geopolitics (with its high-level summits and agreements) to on-the-ground environmental change in one of the conflict's central fault lines: the Black Sea region. How did the Cold War shape the circulation of knowledge, technology, toxic materials, and organisms in Eurasia? How did Black Sea neighbors, on both sides of the geopolitical divide, manage and articulate their shared environmental resources and vulnerabilities? While robust answers to these questions hinge on upcoming visits to Russian, Turkish, and Ukrainian archives, this report will tug threads of inquiry leading to and away from the Turkish Wheat Project.⁵

The Turkish Wheat Project was the joint undertaking of many players, including the Rockefeller Foundation, Turkish and US government agencies, and a multinational cohort of scientists, students, and farmers. Each party contributed its own priorities, expectations, and epistemologies to the organization, whose goal was the symbolic and material construction of a key commodity in the Turkish economy and diet—the so-called “staff of life” in the Near East. It is therefore difficult to overstate the significance and ambition of the project's aims, whatever its legacy in terms of scientific output. Its archive provides a narrative and empirical handhold for exploring a transformative moment in the history of agriculture, science, and the Cold War.

Agricultural Developmentalism and US Philanthropies in Turkey, 1915-1968

The Turkish Wheat Project, while grafted from the green revolution's most emblematic institution—the Rockefeller Foundation-funded and Mexico-based International Maize and Wheat Improvement Center (CIMMYT)—had roots in two deeper processes: the concept that Turkey was not living up to its economic and agricultural potential, and Turkey's courting of American aid and expertise. RAC materials bear the imprint of both. In 1915, for instance, the American Board of Commissioners for Foreign Missions (a Presbyterian organization with a long

presence in the Near East) sought the Rockefeller Foundation's assistance in raising the Ottoman Empire's level of development. While "naturally favored," "Turkey's" natural and human resources were "undeveloped and unused, the cream has been skimmed from the milk as it were...All these things remind us again of what Turkey might be."⁶ "[R]ightly developed," the missionaries argued, Turkey "may become one of the prosperous and productive regions of the world."⁷ The report cited "better agricultural methods" as the most "glaring" of these needs.⁸ Later, as the foundation's International Health Division laid the groundwork for an anti-malaria campaign in Southeast Europe, a Turkish physician expressed his optimism for the United States' role in the region, reeling from more than a decade of war: "I am firmly convinced...that without the help of America neither the old continent nor the ancient orient can arrive at a lasting peace..."⁹

Both trends reached their apotheoses after World War II (a conflict in which Turkey had maintained a controversial neutrality until early 1945). At war's end, Soviet territorial claims to Eastern Anatolia and demands to revisit the 1936 Montreux Strait Convention (which stipulated Turkey's right to regulate the Black Sea Straits) spurred Ankara to seek security guarantees and aid from the other Allied powers. Turkey petitioned and eventually received beneficiary status in the Marshall Plan (1948), and membership in the Council of Europe (1949) and the North Atlantic Treaty Organization (1951). Between 1950 and 1962, Western economic aid to Turkey totaled more than \$1.38 billion dollars—four times the value of Turkey's imports and three times the value of its exports over roughly the same period.¹⁰ Years later, Soviet Premier Nikita Khrushchev would complain that Joseph Stalin had "succeeded in frightening the Turks right into the open arms of the Americans."¹¹

This was the context in which the Rockefeller and Ford Foundations amplified their operations in Turkey. The philanthropies broadened the scope of US aid activities from the military's efforts in road-building, training, and technology transfer to include public health, education, and science.¹² In a retrospective on the Ford Foundation's activities in Turkey, Francis X. Sutton, foundation official and historian, summarized, "The Ford Foundation's record in Turkey shows a degree of concentration that is unusual, perhaps even unique...Some \$17.3 million

were committed between 1952 and 1971.”¹³ The foundation sponsored İstanbul’s prestigious Robert College (established in 1863 by an American philanthropist), provided fellowships and institutional grants, and partnered with the Turkish business community.¹⁴ The Population Council, too, brought money and expertise into the country, after lobbying for the legalization of contraception in the early 1960s. The legislation, they argued, provided the Turkish government “with a tabula resa [sic] situation in which there are few institutional commitments, vested interests, personal commitments, or ideological prejudices that have to be overcome.”¹⁵

However, as in 1915, it was agriculture that took pride of place in this developmentalist discourse. In 1957, an agricultural advisory group (requested by the Turkish government and coordinated by USAID and the USDA) concluded: “Turkey is and always has been an agricultural country. Agriculture must, of necessity, continue to be the basic foundation of the future industrial and economic progress...all of its economic resources find their origin in the soil.”¹⁶ Wheat, the “staff of life in Turkey,” would become the cornerstone of this effort.¹⁷

Throughout the next decade, the Turkish government worked alongside the UN Food and Agriculture Organization (FAO) and USAID to establish contacts with CIMMYT; send Turkish scientists for training abroad; hire consultants from Oregon State University (OSU); and import high-yielding varieties of Mexican wheat. While entrepreneurial farmers and unions appear to have been the first to introduce Mexican wheat to Anatolia, by 1966, Minister of Agriculture Bahri Dadaş committed his agency to the venture. Within six years, roughly 97 percent of the Mediterranean’s bread wheat fields were sown with Mexican-origin varieties.¹⁸

Contrary to a straightforward narrative of technology transfer, however, high-yielding wheat varieties encountered both environmental and cultural friction in Turkey. Imported varieties proved vulnerable to fungal diseases (e.g. Septoria and stripe rust), and after news reports that two children died in Mexico after eating high-yielding grain, some farmers were hesitant to adopt the new seeds. Most significantly, as spring wheats (planted in the fall and harvested in the late spring), most Mexican varieties could not thrive in the dry, high-altitude

landscapes of Anatolia. Outside of the coastal regions, Turkish agriculture depended on winter varieties with low moisture requirements, a cereal type that had hitherto been overlooked by most plant breeders.¹⁹ Confronted with these exceptions, the Turkish government, with USAID encouragement, appealed to CIMMYT and the Rockefeller Foundation.

By spring 1968, the institutional interests underpinning the project had aligned. To USAID officials, Turkish wheat exports would not only “strengthen [Turkey’s] foreign exchange position,” but would turn Anatolian peasants into modern commercial farmers. This, they argued, would “strengthen Turkish society and aid the development of democratic institutions.”²⁰ The proposal reached the Rockefeller Foundation at a fortuitous time. After the outbreak of the Six-Day War in 1967 had derailed plans for a headquarters in Lebanon, the foundation was in the market for a new research center location. Turkey, with its “excellent” geographical location, large “[l]and/population ratio,” “[p]roximity to rich oil/gas resources,” and “[g]reat development consciousness,” seemed an ideal alternative.²¹ Just as modernization theorists were positioning Turkey as a model Muslim democracy, Ford and Rockefeller officials hoped that “the Turkish [wheat] program as it develops may serve as a model for other national programs.”²²

The Turkish Wheat and Training Project, 1970-1982

In April 1969, a memorandum of understanding presented the project’s objectives: increase yields per acre; turn Turkey from a wheat importer to a self-sufficient exporter; breed cold- and drought-resistant wheat varieties; train local technicians; study the economics of Turkey’s cereals sector; and test and disseminate improved farming techniques.²³ Mechanization and the cultivation of new territory had already increased Turkey’s overall levels of production; the Turkish Wheat project would make the sector more efficient and intensive. The project’s architects also directed their reforming impulse to the Turkish

bureaucracy itself, imagining a restructured Ministry of Agriculture and proposing a “Wheat Council” that would coordinate experts from the ministries of agriculture, village affairs, finance, and energy.²⁴

Although this latter goal did not come to fruition—the Turkish Wheat Project never attained the bureaucratic clout imagined by its founders—the project’s scientific operations were underway by summer 1970, co-directed by Bill C. Wright and his Turkish counterpart, Ahmet Demirliçakmak. The staff soon grew to include plant pathologist Michael Prescott and plant breeder Arthur R. Klatt, and in 1974, former-USAID economist Charles K. Mann. At first restricted to experiments on state farms, the project eventually acquired its own farmland at Haymana. Here, the scientists ran experimental plots to compare and demonstrate new varieties, technologies, and practices. The center in Ankara also served as the central hub of eleven smaller stations (several dating back to the 1920s) across Anatolia. While each station enjoyed substantial autonomy, it transmitted data and plant materials to Ankara. This national network of exchange was mirrored at the international scale: one of the project’s primary concerns was the distribution and collection of tens of thousands of plant samples from across the world (and especially the Near East), to be used for crossbreeding at Haymana and elsewhere. The Ankara center also advocated and facilitated the higher education of Turkish scientists abroad. To match a perceived “crying need for young, dedicated young [sic] men to provide much-needed leadership,” the project helped send 58 trainees to CIMMYT and 29 to receive M.S. degrees abroad (many in Oregon, where environmental conditions resembled central Anatolia’s).²⁵

The project, which straddled a fractious period in Turkish history, encountered many challenges, ranging from the prosaic to the jarring. Among the former were low levels of English proficiency among fellowship applicants (in the end, foundation policies were bent to provide candidates with language lessons); salaries insufficient to prevent employees from seeking jobs in the private sector; and “an unusually sticky brand of red tape” in relations with the Turkish state.²⁶ As Turkish politics roiled successive administrations in and out of office, Wright complained, “In the five years I have been in Turkey, I have dealt with eight Ministers of Agriculture. It seems that just as you get one educated to the point

where he can be useful, off he goes and in comes a new one who doesn't know wheat from bananas."²⁷ A year later, Wright reiterated:

Our biggest problem in Turkey right now is the instability in Government...If we could get a strong Government that was truly interested in wheat production, we could give Canada a hard time in the wheat exporting business. It doesn't look like that is likely.²⁸

The political situation briefly veered from the frustrating to the dangerous as right-wing groups targeted academics. The economist Charles K. Mann relayed to New York that his neighbors' flats were bombed in 1978, sending Mann's wife Susanne and their children ducking for cover. Still, the program did not fold. "[W]e see no reason to change our plans. The novelty of this incident," Mann wrote, "is more in its proximity than its occurrence...It is not a happy time here."²⁹

Operationally, the project's most persistent difficulty was converting its research findings to results on the ground, despite a short-lived extension service (which broke down when local staff were poached by other agencies), educational outreach to teahouses and village administrators, and demonstration plots in the countryside. The project's staff were reticent to claim that they had transformed Turkish agriculture. In 1974, Wright responded to a Rockefeller Foundation request for a three-page update with a nineteen-page document whose frankness left the reader dotting the margins with exclamation points. To Wright's comment that "The project has had virtually no impact on increasing production thus far, nor could it have had much influence on production up to this point of development," the reader (likely John A. Pino, Rockefeller Foundation's director of agricultural sciences) scrawled, "!! Why! An urgent evaluation necessary! What are prospects if program continues 5 more years?"³⁰ Though more research is necessary to determine the exact contours of the problem, it appears that the Turkish Wheat Project felt itself suspended in air. The official historian of the project, freelancer Geoff Tansey, called this gap between the center and the Anatolian farmer "the most signal failure" of the program's training efforts. Tansey wrote,

Indeed, apart from a survey in the early 1970s on the coast areas, there has not been any work to determine just who has or has not adopted the practices suggested and the effects of this, even in the highly successful area of central Anatolia.³¹

“[I]t would be a mistake to call it a national project—in name it was, but effectively it was not,” he concluded.³²

Still, as the project’s contractually specified enddate approached in 1979, the Turkish government and the Rockefeller Foundation chose a three-year extension to 1982. Without the wheat project, Turkish stakeholders feared, training opportunities in and supply shipments from the US would cease. The American staff were concerned that wheat research would stall (and the Haymana farm would be repurposed), if Rockefeller withdrew its patronage.

Mann, one of the last staff members to remain in Ankara (“We feel like the last of the Mohegans here with the Wrights’ having left in June [1977] and AID virtually closed up”), lobbied the Rockefeller Foundation to extend the program’s life support further.³³ The centennial of Atatürk’s birth in 1981, he argued, was an opportunity for the foundation to reaffirm its commitment, financially and symbolically (with a visit from celebrity scientist Norman Borlaug).³⁴ In reply, Director of Agricultural Sciences John A. Pino recommended tough love:

Chip, we can’t hold on forever to the Turkey wheat program. We terminated many other country programs—all are difficult. Naturally the Turks want to hold on to a good thing...Surely they can find funds...you will have to look at Turkey the same as we look at everyone else.³⁵

Indeed, the closure of the Turkish Wheat Project coincided with a larger shift in foundation policy away from bilateral partnerships toward larger international agricultural centers. This is also how Pino rationalized the termination to Minister Sabahattin Özbek: “The completion of the extremely successful project with the government of Turkey in many respects marks the end of an era for the Rockefeller Foundation.”³⁶

In February 1982, the project's US and Turkish participants and sponsors gathered in Ankara for a "thorough, tough-minded" review of the last twelve years.³⁷ Although the reviewers acknowledged many shortcomings, the Turkish Wheat Project was "unanimously judged to be highly successful." To the reviewers, nature itself provided the strongest evidence: Turkey's wheat production had risen from 10 million tons annually in the 1960s to roughly 16 million. Additionally, they claimed that the project provided a positive example within the Turkish research community, encouraging interdisciplinarity and inspiring other national commodity programs.³⁸ Dispelling fears that good wheat research would depart with the American staff, Wright reported that the Ankara center's activities continued unabated: it remained the "finest field experiment station between India and Morocco."³⁹ With a \$6.5 million investment from the Turkish government and \$1.25 million from the Rockefeller Foundation, Turkey had "not simply joined the green revolution, but [had] achieved, perhaps, the first dryland green revolution in the world on its central plateau..."⁴⁰

Preliminary Conclusions and Themes

While this report has sketched the Turkish Wheat Project and its context, the interrelationship of its many players requires further research. Just as the Ankara center traded in plant material from across the globe, it drew staff, expertise, and funding from a complex ecosystem of local, national, and international institutions. The RAC files thus provide a strategic, if not comprehensive, source base for exploring how these organizations partnered to shape Turkish agriculture. Broadening the analytical scope to include other developmental sectors also offers interesting flashes of organizations working at cross-purposes. Population Council reports, for instance, blamed unemployment and runaway urbanization on the same type of agricultural technologies distributed by the Turkish Wheat Project and its counterparts. Here, the solution to one developmental problem (an underperforming cereals sector) was said to create another. "In short," the Population Council report concluded, "the situation in Eastern Turkey in terms of falling agricultural fertility, rising unemployment, and high and rising [population growth rate] is frankly terrifying."⁴¹ On unintended

consequences, one might also explore environmental concerns such as deforestation, air pollution, and fertilizer-induced eutrophication.⁴²

The Turkish Wheat Project must also be studied in its geopolitical context. While the project's day-to-day correspondence is notably free from references to the ideological struggles of the Cold War—and the “Conquest of Hunger” as an inoculation against communism argument seems an ill-fit for understanding developmentalism in Turkey—the RAC collections do reflect important geopolitical events.⁴³ The most proximate, perhaps, was the controversy surrounding the 1971 poppy ban, when the US government (citing projections that the majority of the heroin entering North America had its material origins in Turkish poppy fields) leveraged aid to force Ankara into banning production of the staple.⁴⁴ Selectively-bred winter wheat, US actors argued, could replace poppies—now illicit—in the Turkish farmer's seed bag. Demirliçakmak participated in a wheat replacement study and a slice of the \$35 million package to offset the ban's costs made its way to the Turkish Research Center.⁴⁵ When and how did the histories of these two seeds intersect, and with what consequences?

Like Turkey itself, which accepted credit and technical assistance from the Soviet Union in the 1960s and 70s, the Turkish Wheat Project swapped seeds and visits with its communist neighbors. Indeed, some part of Turkey's rising wheat production can be attributed to plant varieties emerging from the Soviet Union itself. Conditions in Thrace, for instance, favored Bezostaya-1, a variety developed by scientist Pavel Panteleimonovich Luk'ianenko. In Turkey, then, is a genealogy of the green revolution that moves beyond the story of Mexican wheat's triumph to include multidirectional circulations across the political boundaries of the Cold War.⁴⁶ Similarly, more work is required to narrate the Anatolian roots (and afterlives) of the Turkish Wheat Project. While the Rockefeller Foundation, USAID, and OSU experts brought new technologies to the task, Turkish horticulturalists—in the lab and in the field—had long engaged in wheat breeding and selection. How did these local contributors shape the agenda and output of the Turkish Wheat Project?

These and other questions, while addressed only briefly in this report, indicate the fertility and multidimensionality of the Turkish Wheat Project archive.

Strategically situated at a confluence of institutions and worldviews, it provides an opportunity for thinking through—and perhaps reassessing—some of the most important themes of the green revolution, US-Turkish relations, and the Cold War.

¹ I am grateful to the Rockefeller Archive Center and its staff for their generous support and hospitality in Sleepy Hollow, New York. Archivist Monica Blank, by aggregating materials related to Turkey and providing an orientation to the collection, deserves additional thanks.

² Steven A. Breth, “Turkey’s Wheat Research and Training Project,” *CIMMYT Today* No. 6 (1977), Folder: Wheat Improvement – Publicity and Reports, 1974-1978, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, Rockefeller Foundation Records (hereafter RF), Rockefeller Archive Center (hereafter RAC).

³ In Rockefeller Foundation correspondence, the Turkish Wheat Project is also referred to as the “Middle East Regional Program” and the “Turkish Wheat Program.”

⁴ Bill C. Wright to R. Redden, February 9, 1976, Folder 35: Correspondence – General, 1976, Box 3, Series 2: General Files, RG 6, SG 19, Field Offices, Ankara, Turkey, FA399, RF, RAC.

⁵ See Begüm Adalet’s excellent report on the Turkish Wheat Project’s relationship to questions of land reform. Begüm Adalet, “Wheat, Land, and Politics in Cold War Turkey,” Rockefeller Archive Center Research Reports, 2017, <https://rockarch.issuelab.org/resource/wheat-land-and-politics-in-cold-war-turkey.html>.

⁶ Alden R. Hoover, “The Status of Preventative Medicine in Turkey with Particular Reference to the Control of Epidemics,” 1915, pg. 74, Folder 3: Medical Education, 1915, 1917, 1921, 1923-1925, Box 1, Subseries 805A: Turkey – Medical Sciences, SG 1.1, Projects, FA386b, RF, RAC.

⁷ Prudential Committee of the American Board of Commissioners for Foreign Missions to Jerome D. Greene, March 2, 1915, pg. 7, Folder 3: Medical Education, 1915, 1917, 1921, 1923-1925, Box 1, Subseries 805A: Turkey – Medical Sciences, SG 1.1, Projects, FA386b, RF, RAC.

⁸ *Ibid.*, 19.

⁹ Osman Cherefeddin to Selskar M. Gunn, May 18, 1925, pgs. 4-5, Folder 394, Box 61, Subseries 2, 805: Special Reports – Turkey, Series 2: Special Reports, RG 5, International Health Board/Division, FA115, RF, RAC.

¹⁰ William Hale, *Turkish Foreign Policy, 1774-2000* (London: Frank Cass, 2000), 123.

¹¹ Quoted in Hale, 120. Despite a decade of Soviet-Turkish partnership in the interwar period, by World War II, Stalin appeared to place little stock in Turkey’s value as a neighbor. In 1940 he quipped, “What is Turkey? There are two million Georgians there, one and a half million Armenians, a million Kurds.” Quoted in Odd Arne Westad, *The Global Cold War: Third World Interventions and the Making of Our Times* (New York: Cambridge University Press, 2007), 59. On Soviet-Turkish interwar partnership and Turkish neutrality during the second world war, see Samuel Hirst, “Eurasia’s Discontent: Soviet and Turkish Anti-Westernism in the Interwar Period” (PhD diss., University of Pennsylvania, 2012) and Onur İşçi, “Russophobic Neutrality: Turkish Diplomacy, 1936-1945” (PhD diss., Georgetown University, 2014).

¹² See Begüm Adalet, *The Construction of Modernization Theory in Cold War Turkey* (Stanford: Stanford University Press, 2018) and Nicholas Danforth, “Malleable Modernity: Rethinking the Role of Ideology in American Policy, Aid Programs, and Propaganda in Fifties’ Turkey,” *Diplomatic History* 3 (2015): 477-503.

¹³ Francis X. Sutton, “Draft – The Ford Foundation in Turkey,” April 24, 1985, pg. 1, Folder 12, Box 75, Series VII: Ford Foundation History Project, Subject Files, Office Files of Francis X. Sutton, FA568, Office of the Vice President, International Division, Ford Foundation Records, RAC.

¹⁴ See Ali Erken, *America and the Making of Modern Turkey: Science, Culture and Political Alliances* (London: I.B. Tauris, 2018).

¹⁵ “Report and Recommendations to the Republic of Turkey for a National Family Planning Program, Field Projects,” 1963, pg. 1, Folder 1811: Turkey: Population Council Mission to Turkey, 1962-1963, Box 191, Accession 2, FA432, Population Council Records, RAC.

¹⁶ Elmer Starch, “Agriculture and Its Basic Relation to National Objectives,” pg. 2, Reports on Project 77-26 Agricultural Advisory Group (Starch Group), 1950-1957, Box 2002A, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

¹⁷ Geoff Tansey, “The Turkish Wheat and Training Project, 1969-1982,” September 1984, pg. 1, Folder: Wheat Improvement – Publicity and Reports, 1974-1978, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

¹⁸ *Ibid.*, 9.

¹⁹ Ralph W. Cummings, H. A. Rodenhiser, and J. W. Gibler, “The Cooperative Wheat Research Program in Turkey,” August 1, 1968, pg. 2, Folder: Wheat Research in Turkey, 1968, Box 1, Series 1: Wheat Research Center, RG 6, SG 19, Field offices, Ankara, Turkey, FA 399, RF, RAC.

²⁰ USAID, “Cereals Production Proposal, Project 277-11-130-444,” March 21, 1968, pg. 10, Folder: Turkish Wheat Project – Organization and Planning, 1968, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

²¹ K. S. Gill, “Development Prospects for Turkey,” April 2, 1968, pgs. 1-2, Folder: Turkish Wheat Project – Organization and Planning, 1968-1969, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

²² “FF and RF Agricultural programs in Middle East,” March 26, 1968, pg. 2, Folder: Turkish Wheat Project – Organization and Planning, 1968-1969, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

²³ Cummings, Rodenhiser, and Gibler, pgs. 6-10.

²⁴ *Ibid.*, 13-15.

²⁵ James H. Jensen, “Turkey Summary,” September 14, 1969, pg. 2, Folder: Turkish Wheat Project – Organization and Planning, 1968, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, A83, RF, RAC; Tansey, pgs. 78-79. Incidentally, Turkish Prime Minister Bülent Ecevit, in office in the 1970s, had been a Rockefeller fellow in the mid-1950s. See Folder 7204: Bulent Ecevit, 1957, 1954-1957, Box 483, Series 805E, RG 10.1, Fellowships, FA244, RF, RAC.

²⁶ Project Staff [Bill C. Wright], “Some Comments on the Mid East Wheat Project,” July, 1974, pg. 14, Folder: Wheat Improvement – Organization and Planning, 1974, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC; Bill C. Wright to Norman E. Borlaug, November 12, 1970, pg. 1, Folder: Turkish Wheat Improvement – Organization and Planning, 1970-1971, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, A83, RF, RAC.

²⁷ Bill C. Wright to John A. Pino, November 14, 1975, pg. 2, Folder: Wheat Improvements – Organization and Planning, 1975, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC. Adalet also features this revealing quote in her report. See endnote 4.

²⁸ Bill C. Wright to Len H. Shebeski, January 16, 1976, Folder 35: Correspondence – General, 1976, Box 3, Series 2: General Files, RG 6, SG 19, Field Offices, Ankara, Turkey, FA399, RF, RAC.

²⁹ Charles K. Mann to Joseph E. Black, April 24, 1978, pg. 2, Folder: Wheat Improvement Administration, 1978-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

³⁰ Project Staff [Bill C. Wright], “Some Comments on the Mid East Wheat Project,” pg. 14.

³¹ Tansey, 63.

³² *Ibid.*, 62.

³³ Charles K. Mann to Joseph S. Toner, October 20, 1977, Folder 36: Correspondence – General, 1977-1978, Box 3, Series 2: General Files, RG 6, SG 19, Field Offices, Ankara, Turkey, FA399, RF, RAC.

³⁴ Charles K. Mann, “COH Fellowships for the Mid-East Wheat Research and Training Project,” March 31, 1981, pgs. 2-3, Folder: Wheat Improvement – Organization and Planning, 1979-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

³⁵ John A. Pino to Charles K. Mann, April 2, 1981, pgs. 1-2, Folder: Wheat Improvement – Organization and Planning, 1979-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

³⁶ John A. Pino to Sabahattin Ozbek, July 1, 1982, Folder: Wheat Improvement – Organization and Planning, 1979-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

³⁷ Charles K. Mann and Bill C. Wright, “Turkish Cereals Project Review, February 3-5, 1982,” March 17, 1982, pg. 1, Folder: Wheat Improvement – Organization and Planning, 1979-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

³⁸ *Ibid.*, 3.

³⁹ Bill C. Wright, “Trip Notes—BCW’s Visit to Turkey to Review the Winter Cereal Research Program,” February 24, 1982, pg. 3, Folder: Wheat Improvement – Organization and Planning, 1979-1982, Box R2003, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

⁴⁰ Tansey, 50, 72.

⁴¹ “Notes on the Trip to Eastern Turkey,” June 1968, pg. 15, Folder 1766: Turkey: Correspondence, Reports, Studies, 1967-1968, Box 185, Accession 2, FA432, Population Council records, RAC.

⁴² On Turkey’s fertilizer use, see Morris Singer, *The Economic Advance of Turkey, 1938-1960* (Ankara: Matbaası A.Ş., 1977), 99, 230-231; C. Nadir Izgın, “Use of Nitrogen Fertilizers in Wheat Production Under the Dryland Conditions of Central Anatolia,” April 1975, Box 2002, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC.

⁴³ On the green revolution and the Cold War, see Nick Cullather, *The Hungry World: America’s Cold War Battle Against Poverty in Asia* (Cambridge, MA: Harvard University Press, 2010), 7-10. Focused on South and Southeast Asia, Cullather’s work does not address Turkey directly.

⁴⁴ See Ryan Gingeras, *Heroin, Organized Crime, and the Making of Modern Turkey* (Oxford: Oxford University Press, 2014).

⁴⁵ Bill C. Wright to John J. McKelvey, Jr., November 2, 1971, pg. 1, Folder: Turkish Wheat Improvement – Organization and Planning, 1970-1971, Box R2004, Subseries 804: CIMMYT – Turkish Wheat Project, Series 105: CIMMYT, SG 1.9, Projects, FA479, RF, RAC; Tansey, 25.

⁴⁶ See Sigrid Schmalzer and Gabriel Soto Laveaga’s comments in “Roundtable: New Narratives of the Green Revolution,” *Agricultural History* 91:3 (2017): 397-422. My thanks to Stefan Pohl-Valero, whom I met in the RAC researcher lounge, for this reference.